The West Front of the Parthenon Athens.

THE LEARNING OF ARCHITECTURE.—I.

ROYAL ACADEMY LECTURES, 1902.

By Professor Aitchison, R.A., *Past President, Royal Gold Medallist.*

THE lectures I propose giving are on "The Learning of Architecture," and I may premise my lectures by saying that the general conception of architecture as an art is that any young person taken at random can become an architect, or, to put it in English, a wise master-builder, if he or she be properly taught. No greater mistake is possible, for to become a wise master-builder is generally only given to very few in a century, except perhaps in certain countries, at those great art epochs when the inhabitants seemed to be blessed with superior abilities, and when the desire for excellence in this fine art may be said to have permeated all classes. Architecture is the poetry of construction, and I believe this poet of construction is born and not made.

No one would think of apprenticing his son or daughter to a poet when neither of them had shown even so small a capacity for rhyming as the wit who wrote an epigram on a University Professor whose name was Hawkes—

"Hawkes
Talks."

Nor would he think of putting either of them with a musical composer in the hopes of their rivalling Handel, Mozart, Beethoven, or some of the great Greek composers, if neither of them had ever shown the slightest taste for music; and I should say that it would not be wise to attempt to make either of them a painter if he or she had never shown the slightest appreciation of colour, nor try to make either of them a sculptor if neither of them had a love of form. But at the same time, if either of the persons mentioned had ever so great a

genius they could not arrive at excellence in any fine art without severe and prolonged study and striving. As Ben Jonson said, Horace's axiom was true that "a poet was born and not made"; but for all that a poet took a great deal of making.

We will suppose that the young person who desires to become an architect is a boy, and was born in the last century and lives in London, and that his native love for the art has been stirred by the sight of some of the many magnificent buildings which London contains, which he hopes to equal or surpass, and that the chance of doing so has been suggested to him by the number of new buildings he sees being carried on. He must have heard that certain buildings, or portions of buildings, have now and then fallen down, and when he sees great towers, spires, vaults and domes, he will naturally ask himself how these wonders are made to stand; from reading or conversation he will find that the method of building these securely has been the subject of investigation for several centuries, and that it is a branch of natural philosophy called Statics. He will probably ask himself how the architects before the discovery of statics managed to build structures of the same sort without this knowledge, and the answer to this is *by experience*. I do not at the present moment recollect reading of any great building catastrophe in Roman times, though there were doubtless many, except the collapse of two vast theatres that turned on pivots to form an amphitheatre, and these were, I suppose, of wood; during the operation of turning them, when they were full of people, the whole collapsed, and so many of the audience were killed that it was said that there was not a single family of distinction in Rome that had not lost one or more of its members.

It is when we come to the Romanesque period that we read of many failures of buildings, and that when they did not absolutely fall they became so ruinous that they had to be pulled down. The only catastrophe that I now recollect in Gothic times is the fall of the central tower at Beauvais. I think it first fell in 1284; in the sixteenth century the architect wished to make it taller than St. Peter's, which is said to be 434 feet high, but the Beauvais tower fell in 1573. The wits of these early generations of partially reclaimed savages are said to have been greatly sharpened by the teaching of the great Abelard in the eleventh and twelfth centuries; but, however it came about, some of the men of these centuries became keen observers and close reasoners, and naturally thought out the causes of these costly failures, and set their wits to work to find a way to prevent them. Owing to the constant fires that took place and the churches that were burnt down, the problem that was forced on their attention was the covering of churches with incombustible ceilings, which of course then meant vaulting, and this was first successfully managed by letting the nave vaults abut on the triforiums; but this only admitted of very small windows in the back wall of the triforiums, and the naves were left in obscurity. The Romanesque architects finally found that if the pressure of these groined vaults could be counteracted at certain points and carried down by buttresses to the ground, the vaults of the nave would stand securely, and large windows could be made in the clerestories, and this may be considered as the foundation of Gothic. At the end of the eleventh century a part of the most daring and intelligent of the population had made a tour through Europe, Asia Minor, Syria, and Palestine, where they came across the Arabs, who had then learned a great deal of Greek geometry and of its further advancement by the Hindus. As the worst of all faults that a building can have is to fall down, and the next to be unstable and become ruinous, our student will naturally make himself acquainted with the laws of statics, which now want a considerable knowledge of mathematics. Being thus equipped with the knowledge necessary for building securely, his next object will be to learn how buildings are to be made into such forms as will captivate the eye and raise the desired emotions. He will find in London several Gothic structures that may well fill him with admiration; but supposing his capacity and industry have enabled him to draw

accurately the nude human form, he will feel that these Gothic forms do not harmonise with it, but he will also find that amongst the many fine examples of Renaissance architecture that exist in London there are those whose suavity and elegant proportions will completely harmonise with the nude human form. He will see, too, that the ungraceful proportions and the crude geometrical forms which were so prevalent in Gothic did not harmonise with the culture that had been developed in Italy at the Renaissance, for Gothic had been

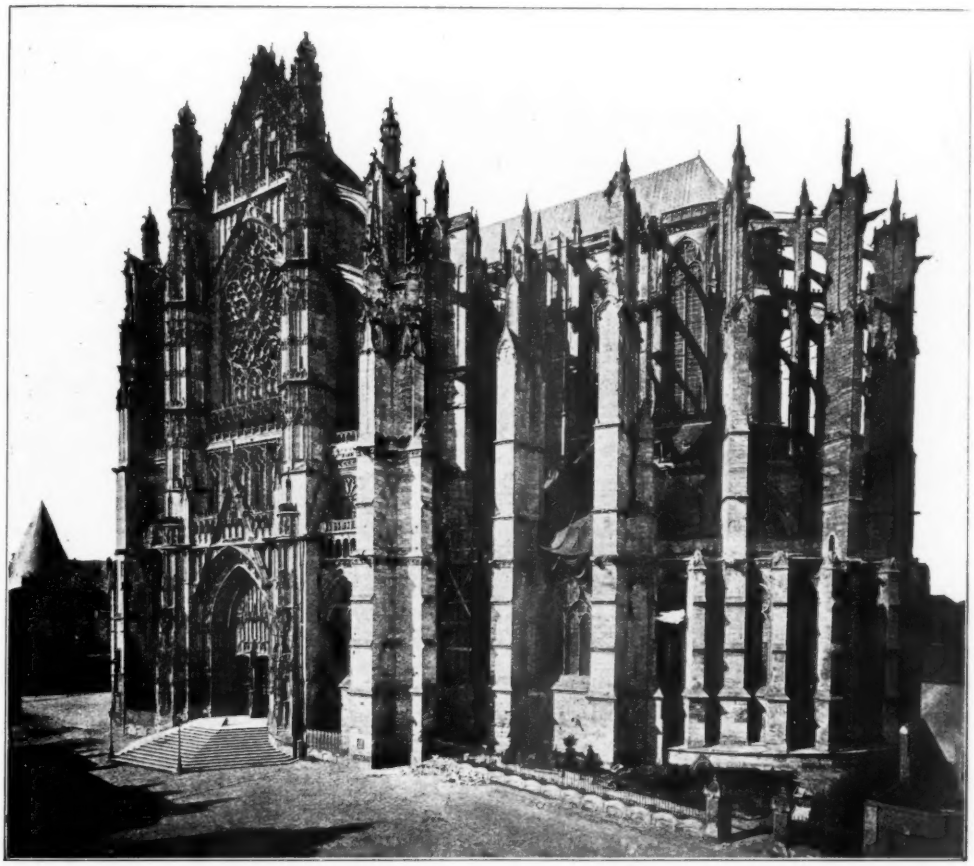

FIG. 1.—BEAUVAIS.

developed at a time when the newly studied geometry was the fashion of the day, and that as the other nations of Europe became cultured too Gothic died out.

The subject that will next engage him is how the different complex arrangements of buildings for various purposes are to be arranged conveniently and healthfully, how the parts of the building of different heights can be formed into an agreeable or striking feature, and how the openings necessary for light and entrance can be so proportioned and grouped as to form an agreeable whole for ordinary buildings, and how the same can be done to produce

exquisite beauty, magnificence, or sublimity in buildings that are made for high and important duties; and though all buildings can to some extent be made to show the ends to which they are adapted, their more recondite uses can only be expressed by sculpture or painting.

From the earliest times architecture seems to have been created for the purposes of religion, and buildings for worship have mostly been made in such a form as to excite feelings of awe, wonder, sublimity, and other high emotions. There is no doubt that certain forms give delight to mankind, whilst others raise the higher emotions. We see in the work of Nature that some forms fill us with delight, others with wonder, others with awe; some mountains have beautiful associated lines and plains, some are lofty and peaked, and strike us with awe, as do the dark mouths of huge caverns against plain surfaces in sunlight; the alternation of the boles of large trees in dark forests, which contrast with open sunlit glades, is enlivening. But as yet we have no regular account of the progression of the art; it seems that most of the prototypes of building have been but enlarged and beautified dwellings of the people, whether these have been caves, huts, or tents. We occasionally see rocks grouped naturally like a mediæval town, as, for example, those near Amalfi.

The knowledge of the methods by which we are taught all that we know of refined early architecture is obtained from actual measurement and from the abstracts of the methods made by Vitruvius from Greek treatises, and from these abstracts we find that an elaborate system of proportioning was carried out, and means were eventually adopted to correct any inelegances of form caused by optical effects; there are some animadversions of Plato on the devices used by the Greek architects to produce the effects they wanted, which Plato considered were deviations from exact truth. From the buildings at Athens being generally in ruins and all horizontal planes that were capable of supporting anything being covered with fragments, those parts of Vitruvius which dealt with these optical refinements were not understood; as far as I know that part of Vitruvius was never properly translated till Wilkins wrote his book on *The Civil Architecture of Vitruvius*, which was not published till 1812, and he candidly states there that he had never observed these refinements in any of the buildings of antiquity. This book caused the English architects who were then in Greece to try and see if they could detect any of those optical refinements in the lines of the Greek buildings. John Pennethorne made some very elaborate attempts, and wrote one or two books on the subject between 1878 and 1884, about which there was much controversy, till Mr. Penrose offered to the Dilettante Society to go out to Greece and take the horizontal and vertical lines by means of a level and theodolite, and this book was published by the Dilettante Society, I believe, in 1851, and was republished in 1888. It is highly probable that when architecture was at its greatest height in Rome that the Greek refinements were adopted in a modified form to meet the coarser perception of the Romans. During the Byzantine period we do not even know whether these optical refinements continued to be used, but it is not at all likely that in Romanesque times such refinements would have been appreciated. No architectural literature has come down to us from Gothic times save the sketch-book of Willars de Honecourt,* which is not a treatise but merely a memorandum-book for his own use; but it is the general belief of the learned that certain proportions were used to get the general harmony of Gothic buildings. Some inkling of the method employed at Milan Cathedral is given by C. Cæsariano in his *Vitruvius* of 1521, on which there are some emendations in Latin by the Marquis Poleni (1683–1761) in his *Exercitationes Vitruvianæ*.

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* *Album de Villard de Honnecourt*, par J. B. A. Lassus; 4o. Paris, 1858. *Facsimile of the Sketch-book of Wilars de Honecort*; Rev. R. Willis; 4o. London, 1859.

The adoption by the Renaissance architects of Italy of the old Roman forms, between 1404 and 1444, took so great a hold of mankind that Gothic architecture, which had nearly worked itself out, was extinguished by the new taste, though in parts of England it lasted till the time of Charles I., when the staircase to the dining-hall of Christ Church, Oxford, was built. This gap in architectural history is greatly to be deplored, for it is unlikely that the mystery of architecture, or the Architects' Trade Guilds, were not furnished with many interesting particulars as to what effects were sought for, and which buildings were considered to have succeeded the best. Unfortunately, after the first rapturous admiration of revived Roman had somewhat subsided, the Renaissance architects seem to have been smitten with a sort of pedantic paralysis, mainly brought about by the Humanists after the finding of the Codex of Vitruvius in 1414, which discouraged invention and bound the architects with

FIG. 2.—DORIC CAPITAL.

antiquarian fetters to imitate strictly the Roman examples. It is true that there was some little resistance to this, but it mainly took the form of extravagance and contortion. We must recollect that though the Renaissance at its first emergence gave a great stimulus to the visual fine arts, it was in itself a throwing off of the fetters of the mind imposed by ecclesiastical authority, and mankind were rapidly led to study the grand phenomena of Nature in the heavens; and this eventually led to a knowledge of some of the laws of Nature, which were ultimately, by the aid of machinery, made to work for us, enabling mankind to increase enormously in number, by giving them the power of the elemental forces to work for them, and these powers that man has become master of have quite thrown into shade the efforts of the fabled spirits which Milton speaks of—

> those dæmons that are found
> In fire, air, flood, or under ground,

and have to a great extent abolished time and space. The means by which the elemental powers are utilised for doing our work is by machinery, which usually takes the most hideous forms, and has not only accustomed us to ugliness, but apparently has almost extinguished the love of beauty, and rendered us callous to it.

All advancement in civilisation has come about by very slow degrees: it is like the coral reef made by the accretions of innumerable little insects; but though it takes a long while to form, when once formed it presents an impenetrable barrier to the wildest attacks of the ocean when driven by the wind.

Every new generation requires some novelty from that which has immediately gone before it. The poets, even, who apparently have nothing to restrain them in their creations but poetic capacity, have all gone back to the study of Homer, commonly called the father of poetry, and even to the Hebrew lawgivers, prophets, and poets, if these be older, as well as to the creations of the great men who have appeared through subsequent ages, to see if they could not capture the means of producing the greatest sublimity with the greatest simplicity; for, as Swift said of writing, nothing great is ever attained without simplicity, and this applies to all the fine arts. Architects must study the methods employed by their forerunners, and learn, if possible, the secrets of those inimitable creations of the Greeks, if they want to surpass them in the present day, and I must remind you of the extraordinary pains the Greeks must have taken to get the proportions and the optical refinements of their temples and public buildings, and their mouldings, so perfect. The Theatre of Dionysos is a wonderful building, which I first saw and admired in a photograph before I went to Athens.

Art is, of course, only science too complex for man's present capacity to unravel, and I dare say if man's delight in beauty is not extinguished, some day we shall have much more solid reasons for making forms that please the eye or excite the emotions than we have at present, and though an art like architecture is very recondite, we can deduce many laws from what has been done before; but in all creative work it is very difficult to know when, where, and how these laws should be applied. Many of the laws are perfectly well known, and the question only is where they are to be applied. For instance, in buildings that are especially wanted for grandeur and magnificence, simple repetition is one of the most important laws to be observed, because, for some reason, variation in repeated things is only a merit when no imposing effect is necessary. The Greeks got over the monotony that simple repetition generally produces by imperceptible variations, and that was only at the very acme of their architectural art. For instance, you do get very tired of the repetition of the Doric order in the Temple of Theseus, but you never get tired of looking at the repetition of the Doric columns of the exterior of the Parthenon, because there are slight variations which prevent them from palling on the eye and make them like the works of Nature.

Contrast is another of the important laws of composition in architecture. We see its continual use in the Greek temples and public buildings, where the horizontal lines of the steps contrast with the columns and their vertical flutes, and where the stiff and rigid-looking triglyphs contrast with the sculpture in the metopes, and greatly enhance the curved lines and modulated surfaces of the figures. The Pyramids of Egypt are perhaps the grandest instances of contrast. When we first see their little triangles they greatly enhance the long dead level of the desert, and what is effected by the horizontal steps and entablatures of the Parthenon is done by the long horizontal line of the front of Lincoln Cathedral,* which enhances, on so gigantic a scale, the effect of the vertical towers.

Symmetry, which now means the repetition of similar features on each side of a central line, is reasonable enough in certain cases—that is, where the two sides of any building serve precisely the same purpose—and is a very useful method of producing a pleasant effect; but what symmetry really means is now called proportion, and that proportion is not an arbitrary one, but is the proportioning each part of the edifice to every other part in

* See illustration, JOURNAL R.I.B.A., Vol. V. (1898), p. 504.

harmonic ratio, which was carried to the highest perfection by the Greeks of the best age, and by Michelangelo.

You have all heard of the word "style," which merely means the forms mostly affected by the people at art epochs, and continued long enough to leave many examples.

As I am not a prophet I cannot say whether this nation will ever be blessed with those capacities that will enable it to evolve something new which is different from what has gone before, and surpasses in its merits the best work that has hitherto been done; but there are no signs of such capacity now existing. If this were an epoch in which there was great architectural invention we could point to the use of iron and steel for the structure of buildings, which certainly afford an opportunity of using new materials unhampered by tradition, and

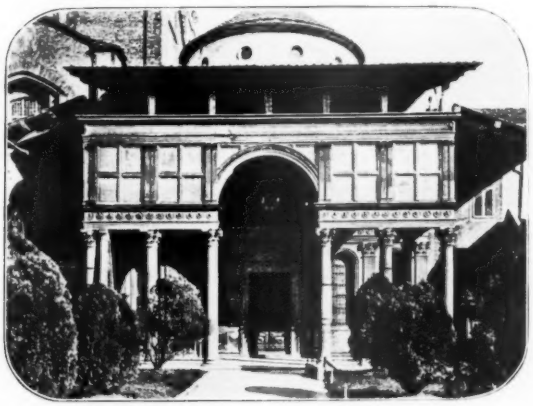


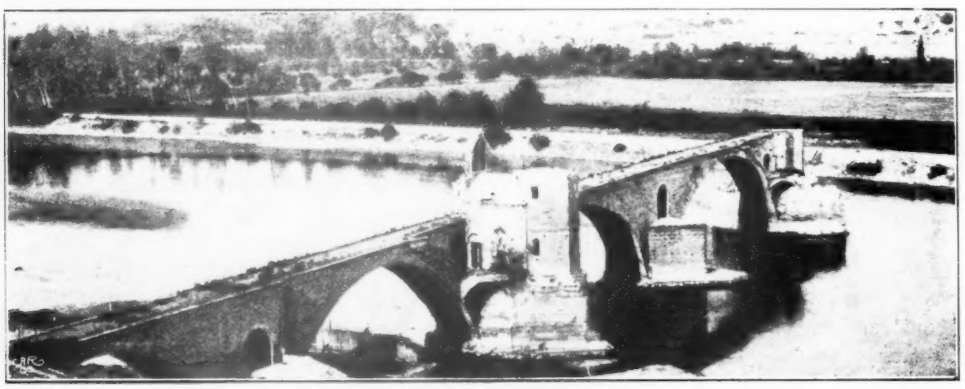
FIG. 3.—THE OUTSIDE OF THE PAZZI CHAPEL, BY BRUNELLESCHI.

which too requires new proportions and a new ornamentation, and may be rendered gorgeous by enamel; but the invention and capacity of the present day in architecture turn away from new materials and new possibilities, and prefer to play new tunes on the old instruments, when they do not play the old ones.

The methods of building hitherto employed have only been perfected in the course of long ages, and that perfecting has not by any means gone on in the same line. The Romans—who had become acquainted with the use of the arch, and found it most admirably suited to their wants—not being an artistic people, not only did not think of producing anything new, but endeavoured to combine the post and lintel work of former ages with their own arched system of construction. And though there was a little improvement or harmonising of these two antagonistic styles in Byzantine, it was not until the savages who overran the Roman empire had got some slight civilisation, and had seen all the architecture of Europe and Hither Asia, that Gothic sprang up. This was new in almost every respect, and it is evident that the Gothic architects and craftsmen considered that they were superior to any race that had gone before, and that they could not be improved by the studying of old works, but were creating something entirely fresh for the admiration of mankind. After Gothic times, although there was a great desire to attain the massiveness and suavity of Roman work, came a period very barren of invention. Except where it formed a hybrid style with Gothic, you may almost say that revived Roman died out through pure inanition, and until we can get a long succession

of architects of great invention and genius the alterations rather incline to run into the form of extravagance and oddity, whereas what we want is an original evolution accompanied by elegant, refined, and beautiful forms, and the whole structure in perfect harmonic proportion. We got some help a year or two ago from a suggestion of that great American thinker on architecture, Mr. Leopold Eidlitz, who said that we want beauty in a cottage, a house, a palace, and a cathedral, but they are not quite of the same sort. They may be compared to the beauty that is found in birds, as in a wren, a dove, a gull, and an eagle: each of these birds is beautiful in its way, but each has a distinct characteristic, and this distinction is gained by each species having the different parts perfectly adapted to the functions they have to perform, and that consequently, when we know the functions that a building, and every portion of it, have to fulfil, and we make the building fulfil all those functions properly, it will take the form we want, and be possibly beautiful but certainly characteristic; but it is evidently a very difficult task to ascertain exactly the form each part should take to resist the stresses and strains that are put on it. Nature possesses the power of making everything that she creates equal to the work it has to do, and gives character to all her works, and to some of them beauty. It is needless to say that our powers are so imperfect as compared with those of Nature that we can hardly expect to secure these ends at the first trial, even if we possess the knowledge that is necessary: but I think it is a very good lead, and one that we should endeavour to follow.

But though Greek architecture, as regards art, is by far the most perfect the world has yet seen, as regards invention and construction Gothic is. Ware says, "In the time of Pericles, though sculpture might be mature, architecture was in swaddling-clothes." But Ware, who was a mathematician and engineer, wilfully miscalled construction architecture.



AN OLD COURT QUARTER OF PARIS.

By William Henry Thorp [*F.*], Leeds.

[*Read before the Leeds and Yorkshire Architectural Society, 6th February* 1902.]

'TIS thirty years since! This fact was brought vividly before my mind, whilst sitting at breakfast in my comfortable quarters in the Boulevard des Italiens, by the unexpected appearance of my travelling companion of the year 1871. To go abroad—to see Paris, had been the summit of our youthful aspirations; and hardly had the city on the banks of the Seine settled down after the terrible war with Germany, followed by the excesses of the Communards, than we two found ourselves one bright August morning nearing the white cliffs of Dieppe, and a day or two later entering the fortifications of the recently besieged capital. How old memories reassert themselves! How true it is that first impressions of foreign scenes and life are not readily obliterated!

Paris in its extremity, and yet Paris already showing signs of renewed vitality! The Hôtel de Ville, a shapeless mass of ruins; the Palace of the Tuileries, a scorched skeleton of its former self; the Vendôme column lying in fragments around its base; the remains of blood-stained barricades—the ambulances of wounded soldiers—and the hated German outpost housed under the shadow of the abbey church of Saint-Denis! A melancholy picture truly; but still one with some gleams of brightness amid its gloom. The sun shone as brightly as of yore, the river threaded its silvery course, spanned by its numerous bridges; Notre-Dame still lifted its twin towers to the azure sky, and the populace thronged the thoroughfares with active movement and vivacious gesture.

The most famous square in Europe, the Place de la Concorde, was still intact. Its obelisk of Luxor, its fountains, and its monumental groups representing the chief cities of the Empire had escaped the hands of the vandal, but Strasburg—then as now—wore its bands of crêpe and wreaths of immortelles.

Yet to be seen was the Arc de l'Étoile, terminating the vista of the Champs-Elysées; and, looking northwards, the Grecian façade of the Madeleine formed an appropriate finish to the Rue Royale as viewed between Gabriel's fine twin buildings of the Garde-Meubles and the Ministry of Marine. Garnier's stately Opera House had not yet received its finishing touches; but the Avenue was practically complete.

To be brief, Paris was entrancing. It has since been revisited many times, and still its power to charm is nearly as strong as ever. It is impossible to exhaust its resources, and its treasures of art year by year increase, to give pleasure alike to the amateur and student.

But it is not the so-called "Sights of Paris" that I wish to enlarge upon this evening. It is not Paris of the boulevards that is to claim your attention. It is a forsaken haunt of royalty, an old Court quarter deserted by fashion, a relic of bygone architecture, that, with what skill I possess, it is my desire to bring before your notice.

There appears to be a general tendency for people of rank and fashion to migrate from east to west—a tendency which is not only to be observed in London, and in many other cities of lesser note, but is common also to the sunny capital of France. If we allow our thoughts to travel back to the time of Mary Tudor and Elizabeth, and to the epoch of contemporary sovereigns on the other side of the water, we do not find the French king and court residing at Versailles or Saint-Cloud. Prior to the time of Francis I. the Palais des Tournelles was the abode of royalty in Paris; and it was not until he had reigned for some years that he commenced the building of the present palace of the Louvre in 1541, on the site of the old château which had previously been demolished.

Pierre Lescot was his architect, and his contribution to this huge pile of magnificent buildings is still to be seen and admired, occupying the south-western angle of the large interior court. The Palace of the Tuileries dated from 1564, and was designed by Philibert Delorme for Catherine de Medicis, though neither she nor her sons ever inhabited it. Catherine was responsible for the abandonment and demolition of the old Palais des Tournelles after the death of her husband, Henry II., who was accidentally killed in a tournament which took place in the immediate vicinity. It was left to Henry IV., the first king of the House of Bourbon, to erect in its place the Place Royale, now known as the Place des Vosges.

The ancient Place Royale is "the old Court quarter" of my lecture. With it I wish to associate and describe the neighbouring beautiful old house known as the Hôtel de Carnavalet, at one time the residence of Madame de Sévigné, and now fitted up as the historical museum of the city of Paris. Both are situated in the quarter known as the "Marais," so called on account of the district having been originally low-lying, marshy

ground. The "Marais" lies on the north side of the river, and east of the Hôtel de Ville; and, roughly speaking, it may be said to be bounded by the Boulevard du Temple on the north, the river Seine on the south, and the Place de la Bastille on the east. It is intersected by the Rue Saint-Antoine. Historically speaking, it is one of the most interesting parts of Paris, and within its limits are to be found a large number of ancient mansions of the nobility, dating from the sixteenth and seventeenth centuries.

To the north of the Rue Saint-Antoine, and running parallel with it, is the old Rue des Francs-Bourgeois, which in its course eastwards is continued across the north side of the Place des Vosges. It is also approached from the Rue Saint-Antoine by the short Rue de Birague, whose vista is charmingly terminated by the picturesque building with its high-pitched roof and arcaded gateways [see p. 205], giving access to the square, formerly known as the Pavillon du Roi. Crossing its portals, the modern world is left behind with

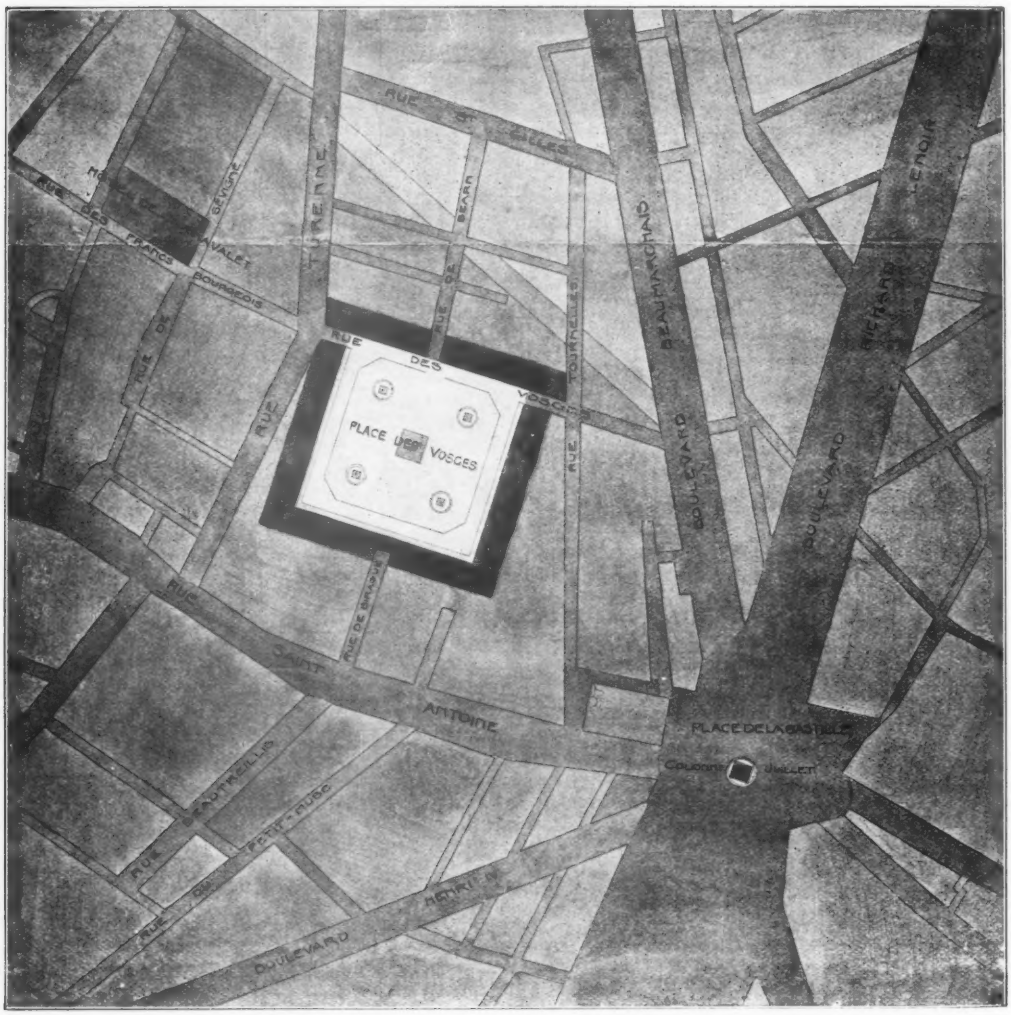


FIG. 1.—MAP, SHOWING SITUATION OF PLACE DES VOSGES AND THE HÔTEL DE CARNAVALET.

its latest novelties in the way of "l'art nouveau" which have even invaded the old-fashioned thoroughfare of the Rue Saint-Antoine. Dotted here and there, the entrances to the stations of the new subterranean electric "Chemin de fer Métropolitain" are roofed with quaint Japanese-looking spreading palm-leaf, or umbrella-like, shelters of glass and iron—coquettish shapes and notes of colour, in the somewhat sombre surroundings of lofty time-honoured tenements, whose windows have looked down upon tragic scenes of anarchy and revolution.

FIG. 2.—PLACE DES VOSGES: NORTH-WEST ANGLE.

THE PLACE DES VOSGES.

The Place des Vosges is a quiet oasis in the heart of the Marais, a relic of the days of Richelieu, and is an excellent and well-preserved example of the architecture of Androuet du Cerceau. Occasionally a motor car disturbs the serenity of the old square as it rushes along the roadway that crosses it on the north, or a bicycle with sounding bell swiftly passes by. Tranquillity, however, mostly reigns. It is now the paradise of babes and nursemaids, of children flying kites or driving hoops, and of superannuated people of ancient date, who pass their days lolling on the benches in the sun, and sleeping their time away. It is the earliest example of a square in Paris laid out on a symmetrical plan, and the credit of its conception must be given to the Duc de Sully, the friend and minister of Henry IV. In the reign of Henry III. the ground was used as a horse fair, and it was not until the reign of his successor that the Place Royale took shape, and was constructed on the site of the old Palais des Tournelles. Its laying out was authorised by a Royal edict of July 1605, but it was not finally completed until 1615, when it was opened with a magnificent fête given in honour of the Infante of Spain, on the occasion of his marriage with Elizabeth, sister of Louis XIII. It will thus be seen that ten years sufficed for its construction.

Its plan is simplicity itself. It consists of a large quadrangle—about 500 feet square. For purposes of comparison, it occupies three times the area of the great court of Trinity College, Cambridge, which is probably familiar to many of you; and which, they say locally, is one of the largest quadrangles in Europe having its four sides connected by buildings. The Place Royale, however, cannot be said to be entirely surrounded by buildings without a break, as intervals are left at its two northerly corners for the crossing of the

continuation of the Rue des Francs-Bourgeois, here called the Rue des Vosges. Otherwise, it is practically enclosed.

Upon entrance, at a first glance, one's mind is impressed with its appearance of great spaciousness. A roadway is carried round it, and the interior space is fenced in with cast-iron railings of modern design, which in the time of Louis Philippe replaced a splendid iron grille decorated with emblems of Louis XIV., which was erected in 1701 to enclose the gardens.

Entering the central area, it will be seen that an equestrian monument forms its central feature. Four fountains with circular basins occupy its corners, and a bandstand shadowed by trees completes its equipment. Needless to say, the bandstand is a modern innovation. The four fountains, of modern design and simple architectural character, enclosed within parterres of flowers of brilliant hue, formed no part of the original project; but the equestrian statue was, if not a feature of the first design, shortly after added to the attractions of the *place* by Richelieu in honour of his master, Louis XIII. The horse was the workmanship of Daniele da Volterra, and had been cast three-quarters of a century before, but had not previously been used. The figure of the monarch was by Biard, a contemporary sculptor, and was represented clad in armour, with a plume of feathers on his helmet. Sad to relate, this celebrated statue shared the fate of so many other objects of historical interest at the time of the great Revolution of 1793, when it was hurled from its pedestal and melted down for cannon by the insurgents. It has since been replaced by a modern replica, which, although it leaves much to be desired from a critical point of view, forms, as did its predecessor, the central feature of interest in the midst of its interesting surroundings.

Let us now leave the open court and give some attention to the ancient buildings with which it is encompassed. Here lamentations on the score of vandalism are hardly called for. Happily, with little exception the exterior of the houses is unaltered, and they remain intact as they left the hands of the builders three centuries ago. Time has dealt gently with them. The touch of his fingers has tended here and there to soften a certain severity of line and to blend into mellow harmony the contrasting hues of brick and stone and silvery slate. Picturesque uniformity is the keynote of the composition—breadth of effect, enhanced, not marred, by piquant detail.

The trained eye of the architect will notice at once that the unity of the architectural composition and the similarity of the character of the houses surrounding the square bear witness to the design having originated in one master mind—the mind in this instance being that of the celebrated architect of the time, Jacques Androuet du Cerceau. Du Cerceau was not only an architect of note, but he was also the author of a celebrated work on architecture, entitled "*Les plus excellents Bastiments de France*," which he dedicated to the "very illustrious and very virtuous princess, Catherine de Medicis," and which was published in Paris in the year 1576.

In number the houses fronting on the square are thirty-six—nine on each side—and the two central pavilions on the north and south are emphasised by being carried up to a greater height than the adjoining buildings. The triple vaulted arched entrances of the southern pavilion form a noticeable feature, the wider central archway being reserved for carriages, and the two narrower ones for foot passengers. A lantern or cupola is the only distinguishing characteristic of the central *hôtel* on the eastern side. Otherwise neither it nor its *vis-à-vis* on the west has anything of note to differentiate them from their immediate neighbours.

The side nearest to the Rue Saint-Antoine, with its central "Pavillon du Roi," was built entirely at the expense of the king, Henry IV.; and building sites on the remaining sides were conceded to his courtiers on payment of a small annual tax, and on the additional understanding that their houses should be erected at once, and that they should be carried out from the design of his architect. The result has certainly justified the king's action; and to his wise forethought we owe the harmonious grouping and symmetry of this important architectural undertaking of the seventeenth century.

In more recent times we have known of imperial magnates assuming the *rôle* of arbiters of taste, with questionable qualifications for the position; but in this instance it will generally be conceded that the royal prerogative was exercised with laudable discretion. The king took the greatest interest in the buildings during the time they were in progress. Whilst in Paris he was in the habit of constantly visiting the works, and when in residence at his country château of Fontainebleau he often referred to them in his correspondence with his minister Sully. Unhappily he did not live to see his favourite project completed. When he fell by the hand of the assassin Ravaillac, in 1610, the square was still unfinished, and he was thus debarred from realising his intention of taking up his residence in the southern central pavilion.

The architectural characteristics of the buildings demand some attention, and we will now spend a little time in an examination of their details. Open arcades of stone on the ground floor, forming a covered promenade round all the sides of the square, support two upper stories of brick relieved with stone and pierced with lofty windows, which are framed in masonry, with rusticated quoins and flat lintels. They are

shadowed by a projecting cornice of bold character and simple design, which, with an almost unbroken line, binds the houses together. High-pitched roofs with hipped ends, "great heaped-up summits of slates, surmounted by finials of lead fashioned with varied ornament" (the mansard had not yet been introduced), crown the whole. Diversified by charming dormers and lofty chimney-stacks, these roofs form an effective finish to the buildings below, and supply that most necessary feature, from an æsthetic point of view, a picturesque sky-line.

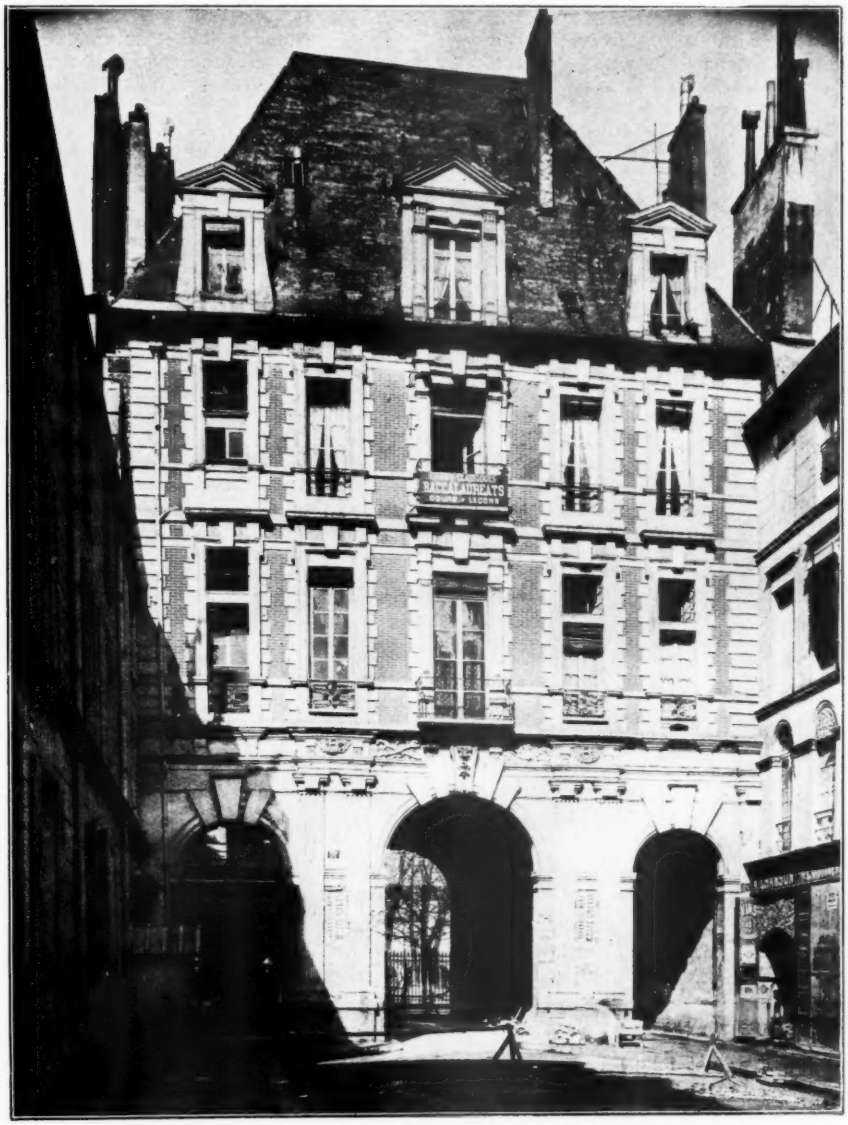


FIG. 3.—PLACE DES VOSGES: PAVILION ON THE RUE DE BIRAGUE.

It will be observed that although the open arcades on the ground floor and the fenestration of the upper stories impart to the buildings an appearance of unbroken continuity, the roof treatment above effectually defines the limits of each particular house. Midway in the high-pitched slopes, or somewhat below, the roofs are hipped back at right angles to the frontage line, this simple device being sufficient in itself to answer the desired purpose. In the case of the two contiguous houses at the southern re-entering angles of the square the roof is not united, but runs down to the cornice level, leaving a V-shaped opening to the sky, which gives a rather weak appearance at these positions—which slightly detracts from what is otherwise an effective treatment.

In the case of a square of later construction—I refer to the well-known Place Vendôme, the work of Mansart, an extremely fine example of the grouping together into one design of a number of smaller buildings—this difficulty has been successfully overcome. Here the corners of the *place* assume an octagonal form on plan, the roof is continuous and unbroken, and the canted sides play as important a part in the main design as the central features on the eastern and western sides. These are each emphasised by being treated with an applied order, which carries a pediment above. We have, therefore, an appearance of strength where that quality is lacking in the earlier design of Du Cerceau.

Returning to the Place des Vosges, we will examine one of the houses in detail, and, to use an algebraical definition, resolve its façade into its constituent parts. Elevationally it is divided into four bays, an arcade of four arches, ranges of four windows separated by slightly projecting rusticated stone pilasters, and four dormers standing on the eaves cornice, the two central ones being loftier and more important than those at either end. It would be difficult to imagine anything much simpler in the way of architectural composition. The semicircular stone arcading, divided by plain pilasters with quasi-Doric capitals, but without bases, is bold in treatment, and gives an air of strength to the ground-floor stage of the buildings. Moulded archivolts spring from imposts of simple detail, which, as they approach the crown of the arches, are diversified by the introduction of three projecting rusticated voussoirs, which give a distinctive character to this part of the design. The arcades are vaulted. The vaulting does not follow the curve of the circular arches, but is elliptical in section, and springs from the wall at a higher level than the impost. The substantial severity of the ground-floor stage is not carried into the upper stories. Here stone alone gives place to a diversified treatment of stone and brick, in contrasting but not inharmonious colour. In truth it is this contrasting colour which gives an added charm to the *ensemble*. The reds and creamy drabs are so happily interlaced, and their pristine hues are so toned and subdued by the passage of years, that the colour effect, as seen between the spreading foliage of the trees adorning the square, is extremely happy.

In this connection another successful example of the use of brick and stone for elevational effect—an example which is familiar to many of you—may be mentioned. I refer to the inner portion of the Cour Royale of the Palace of Versailles, which formed part of the original château of Louis XIII., and which is the oldest part of the building. With its stone pilasters and mellow-toned brick walling, enriched with marble busts on brackets, which were afterwards added at the suggestion of Mansart, it forms a very attractive composition.

Returning to our old square, after this digression, the window treatment of the upper stories of the buildings requires some description. The windows are lofty, and their appearance of height is increased by the vertical lines of the panels which are introduced between them. They are framed within moulded stone architraves, with outer rusticated quoins, and their horizontal lintels are enriched with boldly projecting rusticated voussoirs. This treatment obtains throughout the square. The levels of the heads and sills vary to some extent, and the details may slightly differ, but otherwise uniformity reigns supreme. Here and there a projecting balcony adds interest to the wall surface, and ornamental grilles of forged iron in many cases are introduced to protect the lower part of the windows. Some of these apparently date from the construction of the buildings, but others are of a later period. Venetian shutters, folded back against the walls, also help to diversify the scene, and here, as is often the case at home, they contribute to the general effect.

Surmounting the eaves cornice, the dormers demand a little notice. The lateral dormers, with their segmental arched pediments, are smaller in size than the two central ones, which are finished with the customary pediments of triangular shape. Moulded architraves frame the window casements; and projecting rusticated voussoirs here, as below, add interest to the horizontal lintels. From a constructive point of view one is perfectly aware these latter features cannot be defended; but from the decorative standpoint they impart variety and give pleasing effects of light and shade.

Here and there, resting on the window-ledges, relieved by the shade of the dusky interiors, pots of gay flowers radiate vivid notes of colour. The upper stories, surveyed from the exterior, look decidedly attractive. There is something, after all, to be said for life *au troisième*, and an existence in a garret is not always so melancholy a state of

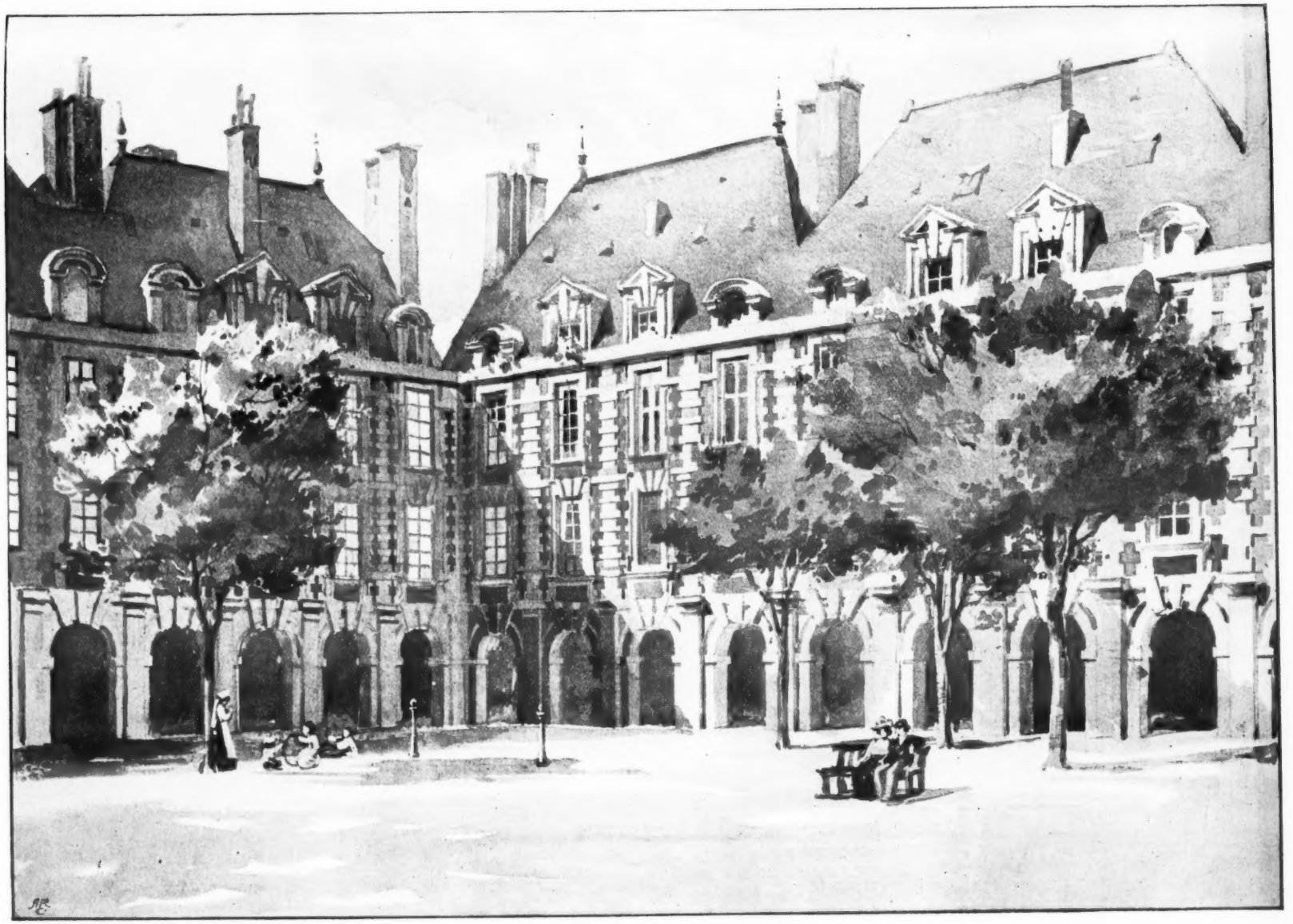


FIG. 4.—PLACE DES VOSGES : SOUTH-WEST ANGLE.

From a water-colour sketch by the author, reproduced in black and white for illustration purposes by Mr. C. W. English.

affairs as it is sometimes depicted. The ascent of many stairs is ofttimes rewarded by a wider range of vision.

Jutting from the roof-slopes of silvery blue-grey slate additional dormers of wood and slate reveal an upper storey still, in some of the houses. As human habitations these may not be so very desirable or worthy of recommendation, but in other ways they may serve a useful purpose.

Roof coverings, as we are aware, are not of everlasting duration — they occasionally require repair. For the purpose of securing ladders and planks for the use of the workmen strong iron curved hooks are inserted at intervals, and will be noticed on careful examination. The architectural student who has sketched in Flanders and Germany will be familiar with these useful accessories, and it is interesting to see them again in Paris.

The chimneys are plain; no other term would be exactly appropriate. They are carried well up above the roof summits, and ascend in unbroken vertical lines from the slates to their slightly projecting moulded copes—for, really, to call them cornices would be a misnomer. The vase-shaped *épis* or finials punctuating the angles of the hips have already been referred to. They are of more artistic interest; and with their mention we must leave the exterior of the buildings and give some attention to their interiors.

In the palmy days of the seventeenth century, when to inhabit one of the mansions of the Place Royale was to be in the height of fashion, the internal suites of rooms must have presented an attractive, and in some instances a sumptuous appearance. The *hôtel* of Cardinal Richelieu, for example, was beautifully furnished; its walls were hung with precious works of art, and objects of interest and value met the eye at every turn. Lebrun and Mignard painted the ceilings of the *hôtel* of M. de Nouveau, and the residence of the Marquis de Dangeau vied in magnificence with that of the great Cardinal himself.

Little of this former grandeur now remains, but some slight idea of its character may be obtained by a visit to the Hôtel de Carnavalet, where on an upper floor a room has been fitted up with the original ceiling, decorations, and appointments of an apartment of the Hôtel Dangeau. The ceiling is damaged, but it has, happily, escaped the hands of the restorer. Here, again, Mignard and Lebrun respectively claim the honour of having painted its panels. The walls, hung with tapestry, and gilded woodwork retaining its old patine, add colour and subdued brightness to this beautiful example of the period of Louis XIV. Its general effect is very charming—a study in golden yellows, russet, bronze, and olive-greens, all toned down by age, and happily blended together.

Returning to the square, the house inhabited by Marion Delorme is pointed out to us, and we are told that long afterwards, from 1835 to 1848, it was the dwelling-place of Victor Hugo, who knew this quarter and its neighbourhood well. Every other house has been the habitation of some celebrity or wit. Ninon de l'Enclos, the celebrated beauty, occupied a fine *hôtel* in the Rue des Tournelles, hard by, which can still be visited; and the *salon* can be seen where Molière first read *Tartuffe* to an admiring and select audience. His *Précieuses Ridicules* was a satire on the extravagant pretensions of some of the literary people and blue-stockings of the day, many of whom, however, were talented, brilliant, and witty. Originally frequenters of the Hôtel de Rambouillet—where, in the days of Louis XIII., Catherine de Vivonne, Marquise of the noble family of Rambouillet, gathered around her a cultured circle comprising all that was best in the world of courtesy, taste, and letters—the later followers of this literary set migrated to the Place Royale. Here what was originally an effort for the promotion of purer language and nobler manners degenerated into affectation and absurdity in too many cases; and it richly deserved the castigation it received from the pen of the famous author and playwright. An exception must be made in the case of Madame de Sévigné. A tablet secured to the wall of the house adjoining the southern central pavilion records the fact that there the writer of the celebrated letters was born. The name of this talented wit and woman of fashion, who exercised so much influence during the latter part of the seventeenth century, deserves more than passing mention, and we shall return to it again, as she is a connecting link between the old square of Henry IV. and the Hôtel de Carnavalet, which is the subject of the second part of my paper.

Before proceeding, however, let us take a last glimpse at this old Court quarter of Paris. It may have lost something of its early attractions, but its beauty and picturesqueness have not yet departed. Its roofs, which formerly sheltered the courtiers of a bygone age, and its *salons*, which were the rendezvous of wit, fashion, and beauty, now fulfil more prosaic duties. Merchants' offices monopolise its principal floors, and its upper rooms are let off in flats. Some of these do not always find tenants, and the familiar notice, "Appartements à louer," appears in many of the windows. In the arcades small shopkeepers transact a quiet business, which cannot prove very lucrative. But, notwithstanding its quiet descent in the social scale, the place and its surroundings are still pervaded by an air of old-fashioned dignity and respectability.

HÔTEL DE CARNAVALET.

Bidding farewell to the old arcaded houses of brick and stone, and wending our way westwards, a short five minutes' walk brings us to the Hôtel

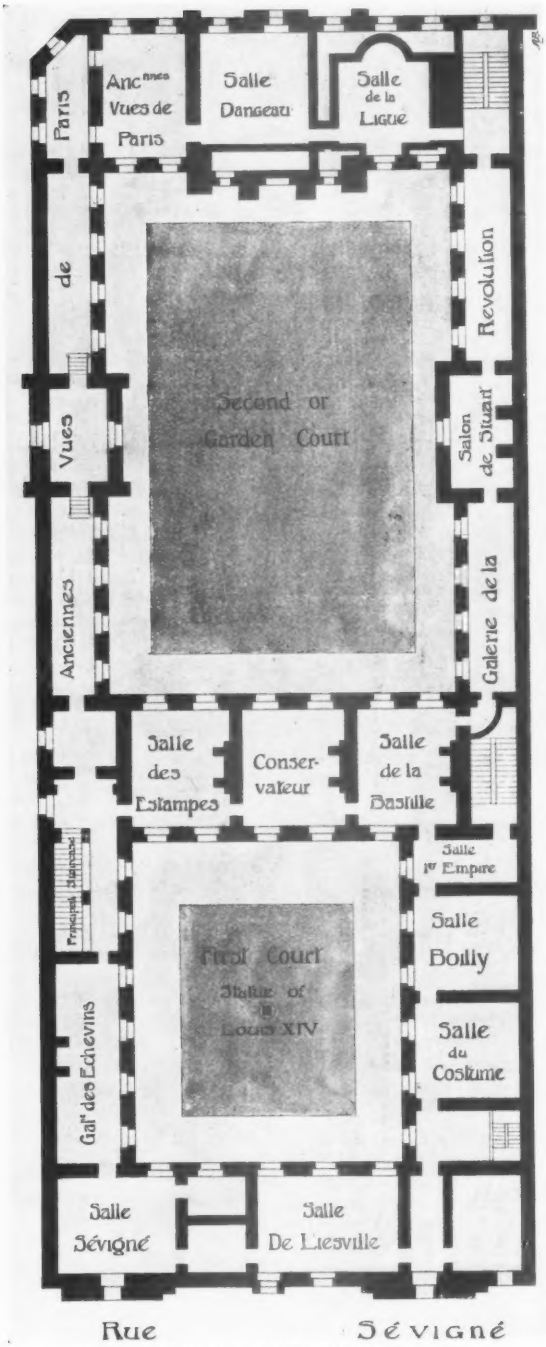


FIG. 5.—HÔTEL DE CARNAVALET: PLAN OF FIRST FLOOR.

de Carnavalet, situated at the corner of the Rue de Sévigné, where it meets the old Rue des Francs-Bourgeois.

A stately city mansion, built entirely of stone, it antedates the Place Royale by fifty or sixty years. It was designed for the Président de Ligueris by Pierre Lescot, the architect of the oldest portion of the Louvre; and another architect, De Bullant, is said to have taken some part in the work. It takes its name from an old Breton lady called De Kernevenoy, who afterwards purchased it; and under the direction of her son a wing on the left side of the court was added by Du Cerceau. Under a later owner, who afterwards let the house to Madame de Sévigné in 1677, Mansart was called in to restore the building. The outer façade he left unaltered, and, beyond the addition of some of his characteristic roofs and some minor architectural embellishments of the inner court, his restorations were carried out on conservative principles, and he did little to interfere with the original beauty of the design.

Thus three distinguished architects, whose respective careers cover the period which intervened between the reigns of Francis I. and Louis XIV., had their share in the erection and completion of this renowned residence. It now forms a home for historical relics and remains of the city of Paris, chiefly pertaining to the time of the great Revolution, and is made into a municipal museum.

The old edifice surrounds a central court. Beyond it is a formal garden, forming a second court, around which are erected reconstructions of ancient buildings, removed here and cleverly grouped and connected together. These we will return to later.

The principal exterior elevation fronts to the Rue de Sévigné. In design it consists of a slightly recessed centre, of which the gateway, or *porte-cochère*, is the principal feature, flanked on either side by pavilions crowned with mansard roofs. The ground-floor storey is plainly treated, and is solid in appearance, recalling to one's mind the defensive characteristics of the palaces of Tuscany where they abut upon the street. To this quality, together with the type of roof adopted, may be attributed the somewhat heavy effect of the building as a whole. It is, however, a dignified and well-balanced composition, and is distinctly Italian in feeling. As such, it is a contrast to the inner court, where the architecture is more French in

manner, and its details of the character which we associate with the reign of Francis I.

The carved decorations of the façade, the lion panels, the lunette-shaped panel over the entrance, and the figures crowning the side pilasters, are said to be the work of the celebrated sculptor Jean Goujon, and if not actually his handiwork they are of his school. To him is also attributed the four fine carved figures of the Seasons, with their attributes in bold relief, which ornament the upper storey of the courtyard of the side opposite the entrance. The central figure of Fame decorating the keystone over the arched entrance is definitely stated by Hare to be the work of the artist himself. Fame is represented by a graceful female figure, clad in flowing robes, with one foot resting upon an antique mask.

The composition and proportions of the entrance, with its heavily-barred side windows, its rusticated enriched with vermiculated work, and its carved decorations imparting lightness and grace where relief from the substantial masonry is required, are extremely skilful and well conceived.

The architecture of the inner court has already been briefly alluded to. It is lighter and more delicate than the exterior. The buildings grouped around it are two-storied, with a cornice of simple members at the eaves level, surmounted by a balustraded parapet linking them together. In the west wing, tall semicircular-headed dormers, the windows framed within pilasters and segmental pediments, rise above the cornice level and stand out in bold relief against the high-pitched roof. The windows of the stories below are of two lights each, divided up with mullions and transoms, and are enclosed within moulded architraves. The proportions of this façade are good; there is an absence of over-elaboration, and the carved figures of the Seasons between the windows on the first-floor stage give a desirable note of distinction and contribute to the general effect.

Doorways at the angles give access to the lateral wings, which in their characteristics vary slightly from the elevation just described. The difference is chiefly to be noted on the ground floor, where the wall surface is arcaded, and slightly projecting pilasters and archivolts divide it into bays and frame in the windows and their upper fanlights.

FIG. 6.—HÔTEL DE CARNAVALET: FAÇADE AND ENTRANCE, RUE DE SÉVIGNÉ, PARIS.

A bronze statue, by Antoine Coysevox, of Louis XIV.—a really fine work of art—stands on a pedestal in the centre of the court. It did not originally occupy this position, but was removed from the ruins of the Hôtel de Ville after its destruction by the Communists in 1871. A tablet on the pedestal records that the monument was erected at the Hôtel de Ville on 14th July 1689, in memory of the solemn feast given to the king on 30th January 1687.

Entering one or other of the corner doorways, and crossing an inner vestibule, the open colonnades are reached which enclose the second or garden court, around which are grouped the reconstructed fragments of ancient buildings.

It has already been said that the restoration or reconstruction has been effected in an extremely able manner. Centres on two sides are formed by pavilions from buildings of old Paris which have had to make way for modern street improvements, and a third is occupied by the rebuilt Arc de Nazareth. This celebrated archway of the sixteenth century was removed from the Palais de Justice. It dates from the time of Henry II., and his interlaced ciphers and other emblems are introduced into the carved frieze by Jean Goujon. It now forms a covered entrance to the garden from the Rue des Francs-Bourgeois, from which it is separated by a high screen of modern ironwork; and through its open interstices pleasant peeps of the greenery within are to be obtained by the passers-by.

At the western end of the garden court the central pavilion is a reconstruction of the Drapers' Guild House, which originally stood on a site near the Halles. Judging from the appearance of the masonry, the work appears to be almost entirely new; but if this is the case it bears evidence of being a faithful representation of the older building.

The ground-floor stage consists of an arcade of three arches, the order employed being the Roman Doric. A fine sculptured panel forms the central feature of the first floor. It consists of a circular cartouche bearing the arms of Paris supported by two children seated on dolphins: and on either side carved caryatides—beautifully sculptured female figures—help to carry the entablature. It is surmounted by a broken pediment, and above it, in bold relief, a seated figure, with a background powdered with the *fleur-de-lis* of France, gives interest to the attic stage.

The Pavillon de Choiseul faces the Arc de Nazareth. This fragment of the ancient Hôtel de Choiseul is an extremely interesting example of the architecture of the time of Louis XIV. The restoration has been carried out very carefully, and in the rebuilding the old masonry has been re-used wherever possible. The detached columns of the central opening on the ground floor, however, are new. A slated mansard roof, bearing aloft a tall vase-shaped finial, covers in the building.

The wall surface of the upper storey is enriched with flat pilasters with carved capitals of acanthus foliage, and an open arcade below forms a portion of the ambulatory surrounding the court. The latter also serves as a shelter for a bronze equestrian statue of Henry IV., which was saved from the ruins of the Hôtel de Ville.

The interior of the Hôtel de Carnavalet and its contents are full of interest. To attempt a detailed description of the collections housed within its walls would be an onerous task, and one quite outside the limits of this Paper. I must therefore be content with referring, in passing, merely to a few of its treasures. It has already been stated that the relics of the great Revolution give it a unique interest. Memorials of the Reign of Terror meet you at nearly every turn, and, as it were, dog your footsteps. Danton, Marat, and Robespierre gaze down upon you from the walls. Portraits of their victims—the unhappy king, Louis XVI., and Marie Antoinette, his equally unhappy queen—sketched in the latter days of their imprisonment, are pointed out by the attentive *custodiens*. A sketch by Hubert Robert—"Robert of the Ruins," as he is sometimes called—whose pictures of ancient classical architecture form one of the attractions of the Louvre, depicts the prisoners of St. Lazare trying to forget their miseries by playing ball, knowing only too well that execution is awaiting most of them.

Another sketch represents the artist himself, in his cell of the prison of Ste. Pelagie. It is washed in in colour. In the midst of his manifold anxieties his buoyant spirits did not fail him. Over the door he has set up the inscription: "Carcer Socratis, domus honoris," and on his table is the inspiring, if well-worn, motto, "Dum spiro, spero." The child of Chénier, the poet who perished on the scaffold, came in for a share of his paternal affection, and numbers of his fellow prisoners experienced the benefit of his unselfish solicitude. Happily, Robert himself escaped with his life, and for several years afterwards was permitted to pursue his favourite vocation.

Here we see the armchair used by Voltaire;—there a realistic mask of the great author in relief, coloured like life, returns your gaze in a weird and uncanny manner.

Historical relics of all kinds and descriptions abound in the numerous rooms; and sketches, pictures, sculpture, porcelain and examples of costume of Paris origin, or relating to the city, represent a period extending over the last three centuries.

Specially interesting to the architect are views of the old buildings, and designs and numerous projects for the laying out and effective architectural treatment of the public places of the city,

many of them being original drawings by architects of note. In this connection may be mentioned a series of clever sketches of the barriers of Paris by Marceau in brown ink and wash; and another drawing in the same medium, the work of Carle Vernet, representing a corner of the Palais Royal in 1810, especially took my fancy.

Elysées and scenes in the Tuileries gardens, touched off to the very life; Norblin's drawings in crayon of somewhat similar scenes; and Vernet's spirited sketches of the promenading gallants of the day?

Mementoes of the occupancy of the most distinguished tenant of this historic house also claim

FIG. 7.—HÔTEL DE CARNAVALET: SIDE OF COURT LOOKING TOWARDS ENTRANCE.
(The statue on the pediment no longer exists.)

Again, it would be a positive sin to omit a reference to the dainty and charming sketches in pencil, brown ink, and monochrome, depicting the life, manners, and customs of the eighteenth and nineteenth centuries, by the hands of the so-called "petits maîtres."

The work of St. Aubin, Gravelot, Norblin, with that of the before-mentioned Carle Vernet, calls for especial mention. What, for example, could be happier, or more gracefully rendered, than St. Aubin's impressions of the races in the Champs-

attention. Here Madame de Sévigné lived from 1677 to 1698; here she spent the latter days of her widowhood; and here she wrote the well-known letters to her daughter, the Marquise de Grignan. These letters are masterpieces of language, and abound in smartness, wit, and epigram. They bear evidence of the greatest care in the selection of words with which to express her thoughts, and in their arrangements for melodious euphony of sound. By her admirers she is credited with being the author of the most

charming of books, when her only intention was the writing of letters. But surely this assertion must be accepted with the customary grain of salt! Read only a few of them, and it is perfectly evident that she intended them for a much larger audience than her daughter only. The relation of her animated descriptions of the doings of fashionable society, and her records of political events, when they reached the family seat of the De Grignans in the south of France, must have added an additional attraction to social reunions and assemblies of the neighbouring nobility. The letters give an epitome of the life of the period, and from their perusal one can readily picture the *vie intime* of society in the golden age of Louis XIV.

Madame de Sévigné occupied a suite of rooms on the first floor of the main building. Her *salon* was the corner of the south-east angle of the *hôtel*, and some of its original decorations are still preserved. Portraits of the mother and daughter, copies of paintings by Mignard* hang on the walls, and a glass case encloses personal souvenirs of her residence. In the former portrait it is interesting to observe the fringe of ringlets on Madame de Sévigné's forehead, a fashion of hairdressing introduced by Henrietta Maria, Queen of Charles I. of England, and daughter of Henry IV. of France—a characteristic feature which is familiar to us in the pictures of Vandyck and Lely.

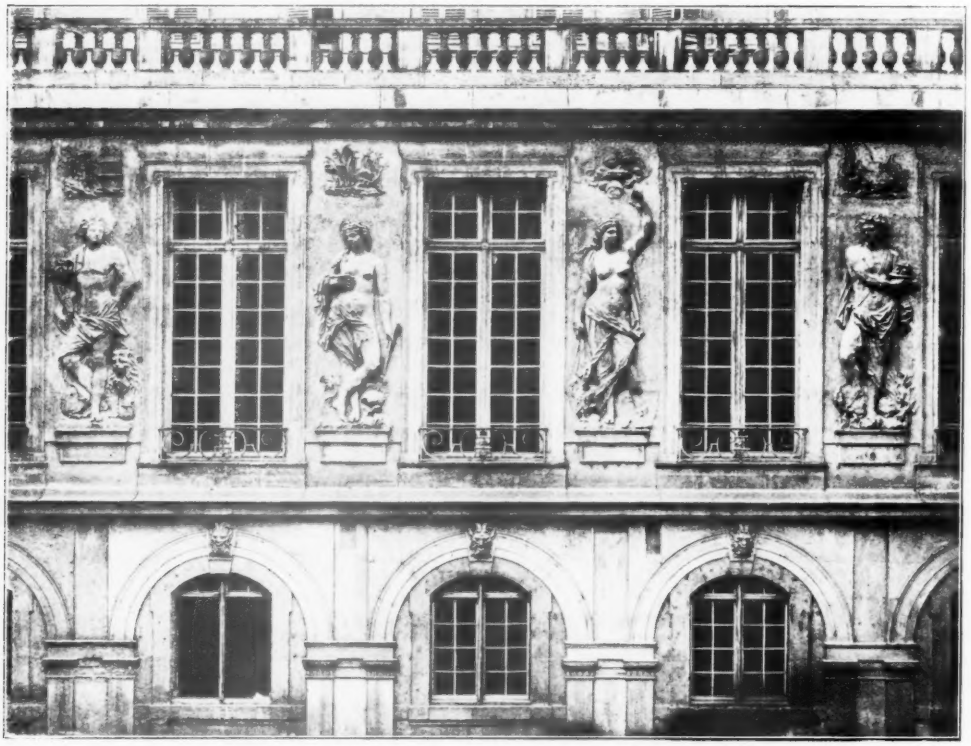


FIG. 8.—HÔTEL DE CARNAVALET: UPPER STOREY OF SIDE OF COURT, SHOWING CARVED FIGURES OF THE SCHOOL OF JEAN GOUJON.

Separated from the Salle Sévigné by a small boudoir is the Salle de Liesville. It retains its fine painted panelled wainscoting and carved decorations of the Louis-XV. period. A portrait of Théroigne de Méricourt, a beauty of the Revolutionary epoch, and a leader in the troubles of the time, occupies a central position on the end wall, and is hung over a picturesque projecting

* The original portraits are now in the Uffizi Palace, in Florence.

carved console table, upon which is placed a bronze bust of Mirabeau. Two of the upper panels of one side of the room are filled with paintings enclosed within borders of rococo scroll work. Painted panels introduced into the upper part of the wainscoting, and more especially occupying a position over the doorways, known in France as *dessus de portes*, were much affected during the eighteenth century.

Distinguished artists, including within their ranks such well-known painters as Boucher, Watteau, Pater, and Lancret, have left us beautiful examples of their craftsmanship in these decorative accessories of the interiors of the period.

Two rooms known as the Salle Debucourt and the Salle des Costumes have their walls panelled in woodwork, painted a greyish white colour of late Louis XIV. or XV. date. Some of the upper panels are decorated with carved trophies of musical instruments.

A further room, which adjoins the Salle Dangeau, has a fine painted coved ceiling attributed to Lebrun. It contains a collection of porcelain of the time of the Revolution, and the wall panels between the pilasters are hung with plates—a veritable *décoration des assiettes*.

A beautiful example of transitional Louis XIV. and XV. carved panelling in hard-wood is to be found in one of the rooms, bearing a name which has escaped my memory; it is also adorned with large mirrors enclosed in elaborately carved frames.

Before leaving the building by the grand staircase descending to the vestibule adjoining the courtyard it is necessary to pass through the Galerie des Echevins, so called from the pictures it contains of the sheriffs of Paris, painted by Largillière. This room was originally used as an ante-chamber to the apartment occupied by Madame de Sévigné, whose drawing-room it adjoins.

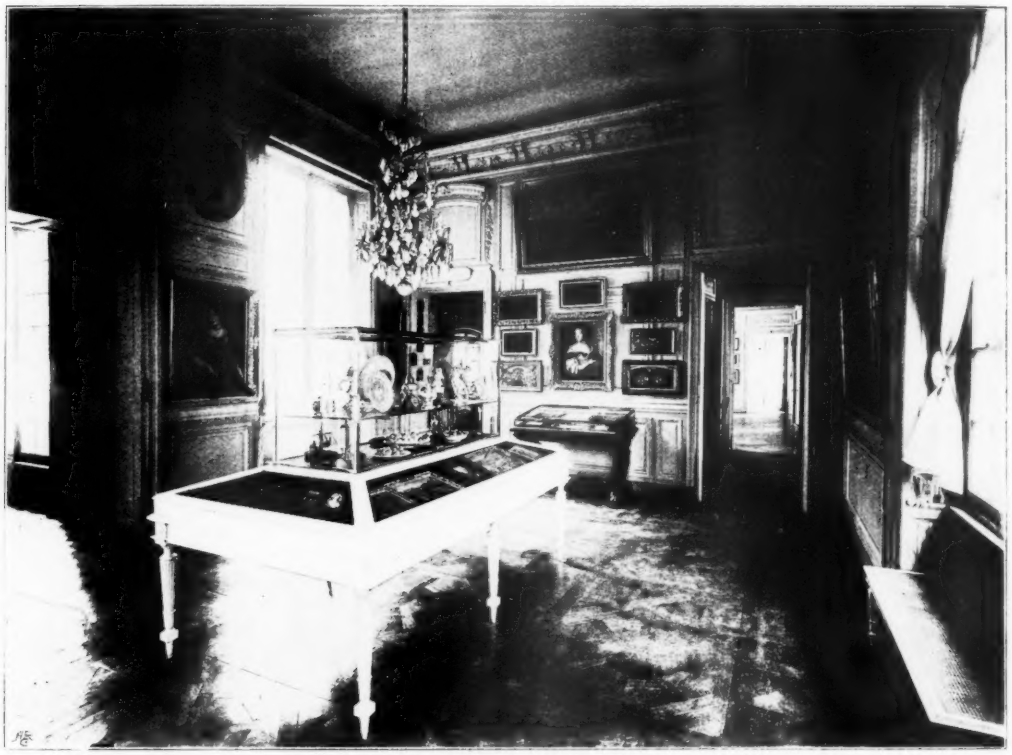


FIG. 9.—HÔTEL DE CARNAVALET: SALON OF MADAME DE SÉVIGNÉ.

We have now made a brief, and, it must be confessed, an incomplete survey of the Hôtel de Carnavalet, and space does not admit of any further description of this historical house and its contents; but probably sufficient has been said to give some little idea of its attractions, and to commend it to the attention of students and others who may not yet have paid it a visit.

Further researches in the neighbourhood will reveal many other architectural relics of the seventeenth and eighteenth centuries, defaced and modernised, it may be true, but still retaining traces of their former magnificence, and bearing the names of notable men who in their generation have served their country and contributed to the fame of France.*

* My acknowledgments are due to Mr. Arthur Vye-Parminter, architect, of Paris, and to M. Cain, the curator of the Musée Carnavalet, for information kindly given to me in the preparation of this Paper; also to M. Emonts, Rue du Four, Paris, for the use of his photographs of the Hôtel de Carnavalet for illustration purposes.

ENTRANCE TO MUSEUM, HÔTEL DE CARNAVALET.

9, Conduit Street, London, W., *8th March* 1902.

CHRONICLE.

PRIZES AND STUDENTSHIPS.

The Arthur Cates Prize.

The pamphlet giving the subjects set for the next competition for the Prizes and Studentships in the gift of the Royal Institute is issued to members with the present number of the Journal. It will be seen that a fresh prize has been added to the list—viz. the Arthur Cates Prize, value Forty Guineas, open under certain conditions to British subjects who have passed the R.I.B.A. Final Examination. Provision for the Prize was afforded by the late Mr. Arthur Cates, who bequeathed to the Institute £1,500, to be applied towards the provision of a prize to be awarded yearly for the promotion of the study of architecture, "more especially in relation to the application of Geometry to vaulting, stability of edifice, and design, coupled with actual measurement and delineation, both geometrical and pictorial, of appropriate examples in Great Britain and foreign countries, it being made a condition that such prize shall be awarded in connection with some examination in Architecture held under the authority of the Charter of the said Institute, and that the recipient thereof shall have previously passed the Final Examination of the said Institute in one examination only."

Competitors are required to submit the following drawings:—

1. The original "Testimonies of Study" which procured them admission to the Final Examination, provided that such Testimonies have been certified by the Board of Examiners as of sufficient excellence to be admitted into the competition.

2. Not less than three sheets comprising studies of subjects of Classical or Renaissance, and of Mediæval Architecture, accurately drawn in perspective and shaded by rule, and also detailed studies of a groined vault of any period between A.D. 1100 and 1500.

Competitors who have passed the Final in 1901 or 1902 will be eligible for the Arthur Cates Prize 1903. The drawings must be delivered at the Institute, in accordance with the General Conditions, on or before 23rd December 1902.

The Godwin Bursary.

The Council have increased the value of the Godwin Bursary for 1903 from Forty Pounds to Sixty-five Pounds.

British Exploration in Crete.

The Council have had under consideration the following letter from Sir W. B. Richmond, K.C.B., R.A. [*H.A.*], on behalf of the Cretan Exploration Fund, of which Sir William is Hon. Treasurer:—

Beavor Lodge, Hammersmith.
7th February 1902.

Dear Sir,—The members of the Institute are doubtless aware of the great importance to Art, Archæology, and History of the excavations being carried on in Crete.

Money is badly wanted; the unselfishness of Mr. Evans, who is conducting the excavations, deserves recognition, and that recognition could be best given by adding to his funds, which, if they are not increased, will prove to be quite inadequate to provide for the termination or indeed the carrying on of the great work.

It has struck me that the Institute might make a grant of money, which would indeed be a great and generous act.

If you consider this suggestion and put it before the Institute, I will see that you are furnished with all particulars.—Yours very truly,

W. B. Richmond.

The Secretary R.I.B.A.

The Council, recognising the value and importance of the work Mr. Evans is engaged in, have voted the sum of fifty guineas in aid of its continued prosecution.

Mr. Arthur Evans's remarkable discoveries on the site of Kephala at Knossos are already well known from the accounts published at intervals in *The Times*. A description of these and other excavations aided by the Cretan Exploration Fund accompanied Sir William Richmond's appeal, and furnishes material for a brief record of them in the Journal.

Mr. Evans's excavations, begun in 1900, brought to light the ancient palace which there is every reason to identify with the traditional House of Minos and with the legendary "Labyrinth." The first season's work unearthed a considerable part of the western side of this great building, including two large courts, the porticoes and entrance corridors, a vast system of magazines containing huge stone jars, and a richly adorned room, where between lower benches rose a curiously carved gypsum throne, on which King Minos himself may have sat in council. In the second season was uncovered more of the western court, and the

continued lines of the south-west angle of the building, a further series of magazines stored with huge jars, the whole northern end of the palace, including a bath chamber, a great central court, and an extensive eastern quarter. Last year's excavations disclosed, too, what appear to have been the principal state-rooms. A triple flight of stone stairs, one flight beneath another, here leads down from an upper corridor to a suite of halls, showing remains of colonnades and galleries.

Apart from the architectural results, the finds within the palace walls throw an entirely new light on the art and culture of prehistoric Greece. Partly still clinging to the walls, partly on the floors of the chambers, were found the remains of a whole series of fresco paintings. Among these the full-length figure of the Cup-bearer supplies the first real portrayal of a man of the Mycenæan age, while miniature groups representing Court ladies show a liveliness and expression far beyond any work of the kind in contemporary Egypt. Another represents a bull-catching scene, in which females take part. There are painted reliefs in *gesso duro*, showing a force and naturalism for which no parallel can be found till the great days of Greek sculpture some ten centuries later. The muscles and even the veins of human figures are reproduced with singular mastery of execution.

The marble mouth of a fountain in the shape of a lioness's head and a triton shell of alabaster, together with many other beautiful stone vessels and architectural ornaments, evidence the high level attained in sculpture. Examples have been found of miniature painting, crystal gem engraving, and intarsia work. Other finds illustrate the connections with ancient Egypt and the East. Part of a small diorite statue bears a hieroglyphic inscription fixing its date about the beginning of the Second Millennium B.C., and an alabaster lid bears the cartouche of the Hyksos King Khyan. A fine cylinder of *lapis lazuli*, mounted with gold and engraved with mythological subjects, bears witness to the early connection with Babylonia.

Beneath the level of the palace itself have come to light the remains of a vast settlement of Neolithic date, the exploration of which has produced a variety of interesting evidence bearing on the remote regions of Ægean civilisation. This is the first Stone Age settlement explored in the Greek lands.

Evidence is here for the first time afforded that there existed on the soil of prehistoric Hellas a highly developed system of writing some eight centuries earlier than the first written Greek monuments, and going back six or seven centuries even before the first dated record of the Phœnician script. Deposits of clay tablets have been discovered, engraved with a linear script, often accompanied by a decimal system of numeration.

In addition to the assistance given to Mr. Evans in his work at Knossos, the Cretan Exploration Fund has contributed towards various works of exploration in the island under the auspices of the British School at Athens. In 1899 Mr. D. G. Hogarth, late Director of the School, excavated a series of prehistoric houses in the lower town of Knossos. Here were found painted vases, showing that a highly developed ceramic art flourished there before the days of Mycenæan civilisation. Mr. Hogarth also successfully explored the great cave of Zeus on Mount Dicta, discovering remains of a prehistoric sanctuary and large deposits of votive bronze figures and other objects, among which the double axe, the symbol of the Cretan and Carian Zeus, was specially conspicuous.

Last year Mr. R. C. Bosanquet, the present Director of the British School, explored the site of Præsos, in the easternmost region of Crete. Among his discoveries were two sanctuaries with votive deposits, and the remains of a large public building of Hellenistic date.

Mr. Hogarth was also enabled by a grant from the Fund to explore an ancient site at Zakro, in the extreme east of the island. The excavations revealed a small Mycenæan town, with well-preserved remains of brick houses and magazines full of earthenware and bronze objects. Not the least important discovery was a deposit of clay impressions of Mycenæan gems and signets containing 150 types, some of them throwing a new light on the early cult of Crete.

Other interesting sites remain to be explored, but before devoting any sums towards breaking new ground, the Executive Committee are endeavouring to raise sufficient funds to enable Mr. Evans to complete his excavation of the Palace of Knossos, a considerable part of the cost of which has already fallen on his shoulders. The work is necessarily costly, owing to the number of workmen employed and the steps that have to be taken to conserve the discovered remains. It is estimated that, apart from the heavy arrears on last season's work, between one and two thousand pounds will be necessary for the adequate completion of this important work alone.

Mr. Evans, it will be remembered, was unable for reasons of health to read the Paper on "The Palace of Knossos in Crete" as arranged for the General Meeting of the 16th December last. The event, happily, is only deferred, and members may look forward to hearing next Session the results of the distinguished explorer's labours from his own lips.

Prior to addressing the Meeting last Monday on the subject of Coal Smoke Abatement, Sir William Richmond asked permission to offer his sincere thanks to the Council of the Institute for the generous donation they had accorded to the excavations in Crete. As Honorary Treasurer of the Cretan Exploration Fund, he said he might do that upon his own responsibility. This very

generous advance towards the promotion of one of the most historically interesting things that had been discovered in our time ought to be an impetus to other societies to subscribe a like sum.

The late Mr. J. F. Bentley.

The Special General Meeting announced for Monday, the 3rd inst., was convened in accordance with by-law for the purpose of electing the Royal Gold Medallist for the current year. The nomination of Mr. John Francis Bentley for the honour had been received with universal approval, and the Council's choice only required the formal ratification of the General Body by his election as Royal Gold Medallist at the meeting last Monday. Mr. Bentley died suddenly and unexpectedly on the previous day, and at the meeting in question the President announced the sad event in the following terms: I think I have to announce the saddest thing that has occurred in the annals of the Institute. Our Council nominated Mr. Bentley as Gold Medallist for this year. On Saturday last Mr. Bentley was seized with a paralytic stroke, and he died yesterday morning. Had it not been for that, I have not the slightest doubt he would have been to-day elected the Royal Gold Medallist. This distressing occurrence puts the Council in a peculiar position. The Royal Gold Medal for Architecture is the King's own gift, and we cannot say what His Majesty's views would be in regard to awarding the Medal to a gentleman who had passed away only the day before. Therefore the Council have this afternoon decided to let the matter stand over while they apply to the King to learn what His Majesty's pleasure may be. Should His Majesty still be willing to let the Medal go to the family of Mr. Bentley, in honour of the work which Mr. Bentley has done, his name would come up for election at the next meeting. Mr. Bentley you all knew, and it seems scarcely worth while to go into a long list of the works he carried out; but for the benefit of those who may not be acquainted with them I may mention that he had been engaged on the Brooklyn Cathedral, New York, a large Gothic Roman Catholic cathedral. As you are all aware, he had been engaged too upon the Roman Catholic Cathedral in the neighbourhood of Victoria Street, which was visited by the Architectural Congress the year before last. Other churches and edifices built by him, or for the decoration of which he had been largely responsible, were St. Mary's, Cadogan Square, Chelsea; the Church of the Holy Rood, Watford; St. Mark's, North Audley Street; the Seminary, Hammersmith; and the Church of Corpus Christi, Brixton. He also restored the church of St. Botolph, Bishopsgate. We know Mr. Bentley's work perfectly well, even although we may not know all his buildings. There was no architect of more refinement and appreciation of correct detail in church architecture than the late Mr. Bentley. I am quite sure we all deplore the loss to the profession as much as if he had been a member of this Institute, which I am sorry to say he was not. I think that as a member of our great profession it would be quite fitting that this Institute, acknowledging his greatness as an architect, should send a letter of condolence to his widow and family.

A wreath was sent by the Institute on the occasion of the funeral, and the Secretary attended officially at the funeral ceremony which took place at St. Mary's, Clapham.

National Photographic Records.

Since Monday members have been afforded an opportunity, by the favour of the National Photographic Record Association, of inspecting in the Meeting-room an extremely interesting collection of about a hundred photographs of architectural work got together by the Association, and now about to be deposited in the British Museum. The Association, the aims and objects of which were described in the JOURNAL for 6th November 1897, soon after its formation, was organised with the object of collecting photographic records of objects and scenes of interest throughout the British Isles, with a view to depositing them in the British Museum, where they may be safely stored and be accessible to the public. A good part of the collection on view at the Institute was the work of the distinguished President of the Society, Sir Benjamin Stone, M.P., an enthusiastic photographer who admits to having photographed most parts of the world from China to Peru.

Sir BENJAMIN STONE was present at the General Meeting of the Institute on Monday, and addressed the assembly on the subject of the work of his Association. It had been suggested, he said, through some mutual friends, that a series of photographs that were on their way to the British Museum might be stopped for a few days and exhibited at the Institute, with the idea of showing that the preservation of such records was a very deserving thing to be done throughout the country. Architects, associated as they were with so many beautiful things and so many historical matters in connection with their work, must know and feel that any encouragement in that direction was commendable. He himself had ventured upon the work rather as an example to other people. He had done a little towards preserving current records, but what one person could do was so small an amount that it behoved everyone who approved of the work to commend it in all directions. It was a common idea that, because everybody had kodaks and cameras in one form or another, there was a great deal of good and useful work being done that might be valuable at some future time. There was, however, no

greater mistake. He had found out that people who took the trouble to do good work neither registered it nor kept a list of what they had done, and when death occurred no one knew what the subjects were that had been collected. That was a very common proceeding. Besides that, there were the wasteful photographers on every hand, who took things and kept them—why, they did not know: they knew nothing at all about them—it was simply a waste of power, money, and time. Sensible people, at any rate, might be urged to keep an historical record of some of the bits they had taken which were instructive and interesting. He was glad to say that, through Mr. Scamell, the Hon. Secretary, and Mr. Alexander Graham, the Hon. Treasurer of the Society—and others, they had succeeded in impressing the public with the importance of the work, and in different parts of the country, in Birmingham, in Warwickshire, and a number of other counties, some really good and useful collections were being got together and preserved. That kind of work should be extended everywhere. What enormous sums of money we would give for records of the kind of past ages! Our own history of the moment was built up on things of the kind that were absolutely lost to us. How valuable an ordinary drawing or sketch is of ten centuries ago—how we prize it and what we think of it for the habits of the people, the kind of buildings, customs, and history generally! Therefore one could appreciate the possibilities of making collections such as these. He would not dwell on the matter: sufficient for him to say how gratified he was to be allowed to address the Institute that evening on the subject. He knew he was appealing to kindred spirits in every possible way, and, if they saw possibilities for urging that such things should be done, they might depend upon it that they were doing a very good work—perhaps a very disinterested work, but one that would be appreciated by generations in the future.

Mr. Alexander Graham, F.S.A., Hon. Treasurer of the Society, said he had come not as a treasurer, for their requirements were small, and they managed to do what they had to do with very little money. He came rather as an enthusiast of the Society and as an admirer of the work of Sir Benjamin Stone and those who co-operated with him in a very laudable object. Anybody who looked round the room and saw the photographs exhibited there would see that the Photographic Record Association was working on right lines. The works now exhibited were simply architectural records, but they had records of all sorts of interesting things. To the British Museum they sent photographic records of old village customs still prevailing in different parts of the country. Sir Benjamin Stone himself had sent photographs of processions and various other local functions that the average public knew very little about, and which would in course of time become obsolete. These now became records, and showed the life of the people of this period. The public, therefore, were very much indebted to the Association for the active and useful work they were doing. Mr. Scamell, the Hon. Secretary of the Association, had kindly promised to attend the meeting of the Architectural Association to be held in that room next Friday, and he would explain in a few words the objects of the Society, and, in view of so many of the members of the Institute being photographers themselves, how the photographs they took might be made permanently available for the public good. It was with very great pleasure that he proposed a vote of thanks to Sir Benjamin Stone for so kindly coming among them that evening, and also to the Association for giving the Institute an opportunity of inspecting so interesting a collection of photographs.

Mr. E. W. Hudson [*A.*], in supporting the vote of thanks, said that Sir Benjamin Stone had spoken with great modesty of his own work, and the photographs exhibited were, he believed, entirely confined to Great Britain. Sir Benjamin, however, was known to have made some most valuable and interesting photographs of Malta, which were to be seen in the library of the Order of St. John of Jerusalem in Clerkenwell. The works represented were apparently of Phœnician origin, and threw great light upon the work in Malta at that period. He should like to ask Sir Benjamin how far his work had extended beyond that island. He should also like to ask the Chairman whether members would have an opportunity the next day or later of inspecting the collection of photographs now exhibited, before their removal to the British Museum.

The Secretary stated that the photographs would remain on exhibition until Saturday morning.

Sir Benjamin Stone said that Mr. Hudson's question opened up a train of thought that he would very gladly make an address upon, because he had photographed most parts of the world, from China to Peru; but the particular photographs referred to must have a considerable interest to members of the Institute. Some twenty-four years ago there had been unearthed at Malta that great Phœnician temple which was known as the Malta Temple and was of extraordinary interest. It was found not only undisturbed, but the altars and figures—which he would call "gods" for the moment—were all in position. It attracted him so much that he went to Malta to photograph it; and he photographed Stonehenge upon the same scale and in the same kind of work, so as to see what resemblance one bore to the other; and, without being dogmatic or even venturing upon the larger question of what Stonehenge meant, he was pretty certain

that the date of Stonehenge might be approximately fixed at the time of the megalithic buildings in Malta; and, moreover, he was strongly of opinion that the Malta Temple would give a clue to what Stonehenge had been in the past. For instance, the great stones upon the trilithon principle in the Malta Temple had been filled up with smaller stones, and the other arrangements which one would understand from a temple of that kind enabled one to fill in from imagination Stonehenge exactly; and his photographs side by side were the most interesting comparison that could possibly be made. He was talking with Sir Norman Lockyer a few days ago upon the same subject. Sir Norman Lockyer had arrived by his calculations at a certain date for the buildings on Stonehenge. He (the speaker) had arrived at the same period, within a few hundred years, as Sir Norman Lockyer had, by a totally different process of deduction. For instance, the great colonists of Tyre and Sidon had fixed upon Malta as a colony. They had introduced megalithic buildings there at a particular date, which was known. The consequence was, if they put those particular buildings side by side—the skeleton, he might call it, of Stonehenge and the Malta Temple as represented—they would get a clear clue to the age and probable uses of the temple.

The PRESIDENT having expressed the thanks of the Meeting for these further remarks of Sir Benjamin Stone's, the vote of thanks was put from the Chair and carried by acclamation.

Coal Smoke Abatement.

Sir WILLIAM RICHMOND, K.C.B., R.A., in bringing forward at last Monday's meeting the Resolution standing against his name in the notice-paper, addressed the Meeting as follows:—

I think it excellent brotherhood that the distinguished architects present this evening should have so generously acceded to a request of mine that they will, being a powerful body, enter with me and my colleagues, not only with sympathy, but I hope also with activity, into a cause which must appeal to them as artists, both on account of the love they bear towards their predecessors' work in that noble and ancient art of architecture, and to protect their own. If there are means by which the dismal smoke of London may be dispelled, even modified—and doubtless there are—you, gentlemen, for the very reason of your far-reaching influence as constructors, are the men best fitted of all others to promote cleaner cities. You will hear to-day, what you already know in part no doubt, from Professor Church, of the irreparable damage caused by the deposit of ashes contained within soot to irreplaceable works of art in architecture. You would have heard, had Sir William Thiselton Dyer been able to be here—unfortunately he is not—of the damage done to the National Gardens at Kew by the smoke from factories in close vicinity. You would have heard from him, and I can tell you the truth, of his fruitless, though earnest appeals to the First Commissioner of Works to execute his prerogative and force the manufacturers of Brentford, who are all parish councillors, to prosecute one another, and, like honourable men, to accept and exercise the duties conferred upon them by their constituents. Now, gentlemen, that Sir Thiselton Dyer is not here, I can tell you in a very few words what he told me years ago. Some ten years ago there was a smoke fog which lasted, I think, for two weeks. I happened to be talking to him shortly after that at the Athenæum, and he said: "It is very curious you should allude to this, because," he said, "I had the residuum of that smoke fog weighed. We had to scrape it off the glass—we could not wash it off; and how much do you think it weighed when it was all scraped off?" My imagination did not reach to those higher points. He said: "I may tell you it weighed six tons"—when scraped off the glass, which covers an area of about a mile. At this moment the question in point is this: Quite one quarter of Kew Gardens is being irreparably damaged by the smoke from Brentford. That is a place that we as members of the Smoke Abatement Society are going to tackle. We have made representations to the First Commissioner of Works without avail, but there is a rift in the clouds. I must not tell you details, but it is possible that the First Commissioner of Works will intervene. In the East End of London—that part of it extending practically from London Bridge to the Nore—along both sides of the river, and stretching far on either side, thousands of factory chimneys are belching forth black smoke day and night, their owners defying that clause in the Act of 1891 by which such breaches of obedience can be restrained by every local authority. Our Society has used every endeavour to press local authorities to enforce that clause in the Act, thinking that it was wiser to start our crusade under a law which was already in existence than to try and make a new law for ourselves, and we have succeeded in a great many cases—in fact, in the majority of cases—with one inspector and an assistant, in gathering together a larger amount of fines on account of the infringement of the law than the County Council and all the Borough Councils together. We have succeeded in all cases brought into court, and now public opinion is being aroused, and the people are beginning at last to say, "Let us really be rid of this nuisance." Borough Councils and Parish Councils, as well as the London County Council, and the Local Government Board, are beginning to whisper among themselves, "It will not do for us to wink at the law very much longer." It is not so much in the matter of factories that the Royal

Institute of British Architects can help the cause, although by giving us moral support they can do so, because the community at large will doubtless think more of our Society, which has enrolled within its ranks a body of men so distinguished as yourselves, men who are carrying out an art which is not only in itself essentially beautiful, but which is essential. Therefore, in this sense, by the enlistment of you into our army of crusaders will be given to us great moral benefit. The other, if I may say so, almost limitless service that you can render the cause will be by promoting the idea among your clients that there is not the slightest reason why their most desirable open fires —the winter suns of England I always call them —should, while benignly warming their houses, darken the outside air and render the atmosphere of London not only unhealthy and unpalatable but conspicuously ugly and destructive. I believe I am right in saying that the habit is becoming more general for people to live in flats, and probably, I should imagine, will become more or less customary as land gets more valuable in large towns. It is no use imagining that the open fire will ever be got rid of. The Englishman is a shy creature. Officials gain courage when they are about to receive a deputation by warming their backs and opening their coat-tails before the deputation arrives. So what we have to do is to provide the shy official with this necessary stimulus to his courage without making smoke. The architects who are responsible for public buildings, should they not insist upon some methods of warming these institutions other than by the expensive and wasteful methods almost universally in vogue? It can hardly be expected that people will be persuaded to burn nothing but anthracite coal, the adoption of which would no doubt be one means of getting rid of the nuisance of smoke almost entirely. The idea of anthracite ever being universally used must, I think, be dismissed. What has to be provided is a smokeless grate, and then that all architects should feel themselves bound to insist upon their clients adopting it. In blocks of buildings for the use of the poorer portion of the community hot air might be laid on from one heat-generating station, and the poor should be encouraged to cook by gas fires. Of course, the individualism of the poor is very remarkable and very natural, and there is something fine in its independence. But it is to be questioned whether such individualism, which engenders want and improvidence, is for their happiness. How much more cheaply and better they could live if they were content to partake in common! and although you, as architects, have no more power than anyone else to dictate to the poor how they are to live, you have the power of recommending to such bodies as the County Council, Parish Councils, and others who construct workmen's dwellings that heat can be produced throughout a large area of building just as gas and water can. Why should there not be a heat rate as well as a gas and water rate? Of course, these are only suggestions, and it is quite possible that there are many in this room who have thought exactly the same thing as I have spoken. My remarks are only intended to be suggestive, because the real interest of this Meeting will be in the discussion. I am quite certain that everyone here to-night is just as much in earnest as I am, and as members of my Coal Smoke Abatement Society are, in the desire to protect works of art from destruction, to promote the cause of health and happiness, and to do individually as well as collectively what lies within their power to make the city that we all love so well more beautiful and more desirable as a place of habitation for the poor as well as for the rich. I hope we shall not separate to-night without coming together as brothers in a very great cause, which has at the root of it not only the æsthetic but the ethical influence which light, order, cleanliness, and beauty go to promote. The resolution I have to put is: That in view of a resolution of the Coal Smoke Abatement Society seeking the co-operation of the Institute, members are invited to join the Society, or that such other assistance be given by the Institute as the Council may deem desirable.

Mr. John Slater, *Vice-President*, in seconding the resolution before the Meeting, said that it must be evident to any architect practising in London that the difficulty is not so much the factories, which are under control, but the house grates in the smaller buildings. To a large extent the difficulty is one of expense. In building a block of flats, it might be easy for the architect to adopt one system of heating, which would result in a very small amount of smoke; but with the large number of buildings put up, unless one had some power to control the speculative builder, and force him to do his best to diminish the smoke curse which assailed the city, he was afraid very little could be done. He was quite sure that if by joining Sir William Richmond's Society, and doing all they could to support and to help and foster its efforts, they could do any good, the majority of members of the Institute would be only too pleased to do so.

Professor A. H. Church, D.Sc., F.R.S., said he had been asked to say a few words upon the chemical aspect of the question. They probably all knew the outlines of the chemistry of fog and smoke, and of the London atmosphere. He should like, however, to define it by making a few observations with regard to the chief constituents of that fog, and of the London atmosphere. In the imperfect products of the combustion of coal and coke, of gas and of anthracite —when that combustion is imperfect—we have not only carbon or soot, but also tarry matters.

We have sulphurous acid, which rapidly passes into sulphuric acid, and also a considerable quantity of ammonia, and of what chemists call compound ammonias. These products which escape by the chimneys of our houses and factories are partitioned in different ways. If it were not for the solid particles, of carbon the imperfect burning of coal would do much less harm; but it is these solid particles, which gather to themselves the moisture, the acids, and the ammonia compounds, and then become deposited upon our buildings, upon our plants, upon our skylights, upon our streets, which do us so great an injury. Not only do they darken the atmosphere and soil the buildings, but they bring their active chemical ingredients into close contact with the stone. The rain itself, it may be said, will do that, but it is not always raining, while we have the smoke almost always with us. The rain, it is true, "scrubs" this atmosphere, as the manufacturer of gas says, passes through it, takes up the sulphuric acid and other things, and carries them principally straight down on to the flat surface of the pavement, or the road, or the skylight, and to a great extent does not cause them to act upon the vertical surfaces of our buildings. But the soot lodges everywhere. The soot comes laden with its impurities and attacks the stone. On the occasion of a recent meeting of the Smoke Abatement Society, he (Professor Church) showed that extraordinary piece of incrustation from the plinth above the colonnade of the dome of St. Paul's—not half an inch or an inch, but in some places three inches in depth. It contained only one per cent. of carbon, but a half per cent. of tarry matters and a quarter per cent. of the ammonia compounds which are so peculiarly deleterious to vegetation, and which had done so much damage at Kew and in the neighbourhood of London. Whenever a north-east wind blows, these substances are carried in the direction of Kew and deposited to the injury of vegetation and to the darkening, to a great extent, of the large area of glass in the Royal Gardens. A great improvement had taken place—not, alas! in smoke-consuming grates for domestic use, for there still remained a good deal to be done in that direction, but in the mechanical washing of coal at the collieries. The enormous quantity of sulphur removed in the form of iron pyrites and other compounds by this process of mechanical washing, which would, no doubt, be adopted in most large collieries, had got rid of, perhaps, a third of the amount of sulphur in the washed coal. There still remained unfortunately in the coal a quantity of sulphur which no washing will remove even if absolutely perfect—that is, the sulphur in organic combination with the carbon, hydrogen, and oxygen of the coal. That is part of the essential composition of the coal, part of the materials which make up the bulk of the fuel itself, and that sulphur no cleansing operation could get rid of; so we shall always have the sulphurous acid and the sulphuric acid, however perfect our grates may be, and however perfect the combustion of the products may be. With regard to another matter touched upon by Sir William Richmond, for twenty-one years he (Professor Church) in his own house had used nothing but anthracite in firebrick grates, and he had found it not any more expensive than the ordinary bituminous house coal, and he had had no difficulty in lighting it, either by means of jets of gas or even with the use of wood with a very small quantity of this enemy of art—common bituminous coal; but at the same time he was bound to confess that it was impracticable to suppose that we should be able to use nothing but anthracite, and in view of that most certain fact, further improvements in smoke-consuming or non-smoke-producing grates were greatly to be desired. He wished to thank Sir William Richmond for the very clear way in which he had brought this resolution before the Institute. He had listened to his remarks with great pleasure and with cordial approval.

Dr. Des Vœux said he had taken some little interest in this question of abatement of smoke from private houses. It was a large subject to tackle, and a very difficult one to a man who had no architectural or engineering knowledge, but Mr. Bryan Donkin, a member of the Coal Smoke Abatement Society, who was equally interested in the abatement of smoke from factories, kindly consented to assist him in the matter. They began with the proposition that the Englishman would stick to his open fire and burn dirty coal. He had tried over and over again to get his friends to burn anthracite, coke, or gas, but they all had some reason against it—either they could not get it, it was too expensive, gas burned away too much, or it smelt, or dried the air. Therefore they had to start with the proposition, could smoke be diminished from an open grate burning an ordinary coal? To test that question they had to go rather more deeply into it than at first appeared probable. In the first place they had to get a chimney, and secondly, a chimney that they could pull about, take out the grate that was in it, and put other grates in. Then they had to get a room facing the top of that chimney so that they could measure the amount of smoke coming from the chimney. It seemed absolutely impossible to get the circumstances necessary to test these grates. But through the kindness of Lord Esher, Secretary of H.M. Board of Works, they were offered two rooms in H.M. office in Westminster, exactly what they wanted—an ordinary sitting-room about 16 feet square and an observation-room opposite. In that room, when they first went, there was a fireplace very

similar to the one in the Institute Meeting-room —very similar to it, he was ashamed to say! Let that be their first lesson! That fireplace they took as their standard. That fireplace burnt a very large amount of coal and caused a very large amount of smoke. It was tested for three days of eight hours, and the results of the test showed that it was a wasteful grate and a smoky grate, but that its heat production was fairly good. The records of those were all kept, and were in process of being published. He thought they would be published next week. In order to go fully into the matter, they advertised in two of the daily papers for so-called smoke-abating grates. As a result of the advertisement they got five other grates to test which were claimed to be smoke-abating, and he was glad to say that certainly out of those grates four of them did diminish the smoke to an enormous extent, and one of them was very nearly a smokeless grate—in fact, he might say, almost perfection. It gave an enormous amount of heat—15 or 20 per cent. greater heat than any other grate—and it burned 25 per cent. less coal than the next best. Compared with their Meeting-room grate, it burned 50 per cent. less coal, gave 20 per cent. more heat, and emitted at least 35 per cent. less smoke. The result of these tests would shortly come out in the *Lancet*. It was difficult to publish, owing to the enormous number of figures. The temperatures were taken in various parts of the room every half hour for eight hours, the amount of coal put on was weighed, the number of times the fire was stoked recorded, the amount of unburnt coal at the end of the eight hours, the amount of ashes; so that every fact of the least importance was recorded and kept for publication. As far as he knew, this was the first prolonged systematic examination of these grates to find out whether there was any real good in trying to diminish the amount of smoke from domestic fires, and the results were extremely encouraging. What was wanted in London was some central board which would take up this matter, test domestic grates, and select a certain standard of grate, and lay it down that that grate or some similar standard was the grate which must be used, and for the future no grate that emitted a larger amount of smoke than these standard grates must be put in any private house. That, however, only touched the question of smoke from sitting-rooms. He had not gone into or tested in any way the smoke from the other part of the house—viz. the kitchen grate—but he had overcome the smoke from the kitchen grate entirely in his own house. He had been in his present house four and a half years and never had his kitchen chimney swept yet. That showed there was not very much smoke in his kitchen. He had got over it entirely through cooking by gas. It was a very practical way, and he knew exactly what it cost him, which was a very important question. In deciding to cook by gas he was confronted with the difficulty of the hot water supply, and he went to the gas company and all round London to find out. At last he found it could be very simply and economically done by putting in a coke boiler, which was an extremely inexpensive method. At any time of the day or night he could get hot water of a temperature of 170° F. The heating by a coke boiler cost him about 1*s*. 6*d*. a week—at the outside 2*s*. in the winter. He found he had so much hot water from his coke boiler that he had to put in three radiators, so, in addition to baths and washing apparatus, he was able to heat the passage in the house. Those facts proved that a great deal could be done if there was combined effort to do it. There must be some central board or authority to show that this could be done, and if it had to be shown the Royal Institute of British Architects was the sort of society in London to do it.

Mr. W. D. Caröe, M.A., F.S.A. [*F.*], said that as a member of both the Societies concerned —viz. the Institute and the Smoke Abatement Society—he should like to thank Sir William Richmond and Professor Church for bringing this matter forward, of so great importance as it was. It was very interesting to hear of the tests which had been made, and that there was a grate which apparently was promising. They had not been told the price of the grate, which, of course, was a matter of some importance in passing it off upon clients, and especially poor clients. But he was afraid that that was not quite all that had to be done. Even supposing they had this central body constituted—a suggestion which he entirely approved of and would entirely support—how was that central body going to enforce that such a form of grate was to be put into all the houses which now exist?—and after all the largest amount of smoke came from the small houses, as, for instance, those in the East End of London. Sir Charles Cookson, who was an energetic member of the Smoke Abatement Society, had certainly made a discovery which it seemed possible to apply generally if one could only get the gas companies to move in the matter. The gas companies had shown how they could derive immense profit from the penny-in-the-slot system of cooking by gas. The poorer classes, unfortunately for themselves, did not require hot-water apparatus; but they had just been told of a manner in which the difficulty might be solved, and it was a manner he always endeavoured to get his clients to use, because it was effectual and cheap. The great point was how to get the poorer classes to use existing grates so as not to create smoke. The principle was an exceedingly simple one. All that was required was a small gas jet, a little circular pipe put under the bottom of the grate with a few holes in it. In the bottom of the grate was inserted a small market-

able article called a crater. Sir Charles Cookson said that that crater was not really necessary: his own experiments led him to suppose that it was certainly advantageous. It cost one shilling and sixpence. This was used only for lighting the fire by turning it on for about five minutes. For a slow stove he found a little more than five minutes necessary—perhaps ten minutes at the outside—to ignite the coke fire, and that coke fire would give out an excellent heat. It would give out a little blue flame, not, of course, the comfortable flame of bituminous coal, but it made an exceedingly pleasant fire. If the fire went down the gas had simply to be turned on again, and in two or three minutes the fire was bright again. Coke, again, required hardly any stoking. Sir Charles Cookson had fitted up his own house entirely on this principle: he had had it going now for a year, he believed, and never had any coal in his house at all; he found it perfectly successful and exceedingly cheap. But, of course, its cheapness consisted entirely in using the gas for a short time. It seemed to him that all they would have to do would be to persuade the gas companies to insert these installations under the fires free of cost to make an enormous profit out of it. We all know how careless our servants are, how careless we ourselves are, and how exceedingly careless the poor are. They will light their coke fire with their little gas arrangement, and leave the gas burning all day long and continue to pay for it, all to the advantage of the gas companies. But he felt perfectly certain it would pay the gas companies thoroughly well to put in these installations free of cost, just as the electric light company in the East End of London, where installations could not be afforded, were supplying the wiring in the houses entirely free of cost simply for the use of the electric light; and the gas companies might supply the installation simply for the use of the gas. If we could get the gas companies to take up this system, which worked so exceedingly well, he felt sure the difficulty might be solved to a very large extent. He would, of course, also carry out the other suggestions which had been made in dealing with new houses. He was very sorry indeed that Sir Charles Cookson was not well enough to attend that evening and explain the matter himself, so he had endeavoured to do it for him, because he had tested this practically and found it quite successful. He would give an instance of its efficacy. He had to deal, not long ago, with an old flue in a house built at the beginning of the last century, which constantly got choked with soot with an ordinary fire beneath it. He took out the fire, put in this arrangement, and it acted admirably; the chimney had never been clogged or required sweeping since. He should say that the credit for this arrangement belonged not to him, but to Sir Charles Cookson.

The PRESIDENT: I presume that in the flue you were speaking of they had been using all coal, and afterwards they used coke. So that the whole question is determined by people using coke instead of coal.

Mr. CARÖE: Absolutely.

Dr. WYLD said that, simultaneously with Sir Charles Cookson, who was a friend of his, he began to apply gas for lighting his drawing-room fire, and he found it perfectly successful and a great deal more economical than wood. It had this advantage: if one left the drawing-room for some time, and came back when the fire was almost out, except a small spark, by merely turning on the gas it blazed up, and one had a good fire in a couple of minutes. It was a most admirable plan. With reference to the gas companies supplying this apparatus free of cost, he might say that he was very intimate with the directors of the Gas-Light and Coke Company, and they had every reason to be grateful to him, because through a suggestion he made to them twenty years ago their revenue had increased £500,000 a year. He had approached them again and again, and he had one of the directors with him, but none of the others, and he could not induce them to supply this apparatus for lighting fires by gas. If they did adopt it, it would put some £300,000 a year into their pockets for extra gas. Dr. Des Vœux had spoken of a very admirable new grate, which he said was very economical, and which seemed in every way desirable; but the principle of that grate was fundamentally the existence of a blower in a certain portion of the grate, namely, in the basement instead of at the top. He would particularly urge upon architects that they should consent to build no house unless provided with grates with blowers. The blower was a most admirable adjunct. If in lighting a fire they put down the blower, there would be no smoke at all so long as the blower was down. All the smoke in London in the morning was due to the lighting of fires, and if they were all lighted with blowers there would be scarcely any smoke. In his drawing-room grate there was a blower, and the smoke had disappeared. A blower costs only about half a crown to add to the expense of each grate, and if they were old grates all that was required was to drill holes in the ironwork, put in pegs, and hang a thin iron sheet before the fire. It was a most admirable thing, and he could not conceive why it was not universal. He wondered that architects, who were full of brains and full of intellect and keen in competition, did not try to do things of that kind. They went in for beautiful grates and ornamental grates; why not go in for grates with blowers equally beautiful?

Mr. E. W. HUDSON [*A.*] said that their general experience did not endorse the remarks of the

last speaker. Blowers seemed to draw the fire up the chimney, but his experience was that they did not get rid of the smoke at all. The smoke passed up the flue, but the smoke was there all the same. He saw a grate some time ago in which, instead of the grating at the bottom, there was an Archimedean screw. The coal was put in the centre, and the screw given a turn with a ratchet, and that shifted the coal into the middle of the fire. That seemed a simple arrangement, but its expense would prevent it being used by poor people. As regards new houses, schemes had been tried by making the flues horizontal and drawing them together to one shaft, and there consuming the smoke before it passed into the outer air. Perhaps someone present could give them the result of some experience in that way.

Mr. JULIAN CORBETT, who was called upon by the President, said that from what had fallen from speakers the subject seemed a very difficult and a very technical one. It seemed to him from what Dr. Des Vœux had said that it was possible to abate smoke from an open grate, and he could not help thinking that the cause would receive enormous help if the Institute could see its way to appointing a committee to consider the subject. The Society had only considered it at present from their own point of view, but it was of immediate importance that it should be considered from a technical and scientific standpoint—from an architect's point of view. The Society felt that unless they could meet the views of architects they were simply beating the air, and it was impossible for them to know the practical difficulties which stood in the way of what might be only their pretty little theories. Therefore it would be a great gratification to the Society, and it would help the cause, if the Institute could see its way to carry on experiments by a committee or otherwise.

Mr. C. H. BRODIE [*A.*] referred to what was called a "well-fire," a kind of fire commonly used in the North of England, and that was being used in London at the present moment. There were several manufacturers of such a grate, but it was not necessary or desirable that he should name them. He should like to know if one of the fires Dr. Des Vœux experimented with was one of this particular kind.

Dr. DES VŒUX: Yes, I did test a "well-fire," and the result was fairly satisfactory—much more so than would be the case with the kind of grate you have here.

The PRESIDENT said he was sorry to hear their nice fireplace abused so much. He had often stood in front of that fire and enjoyed it very much. It gave out a good deal of heat, whatever amount of smoke it produced. Dr. Des Vœux had told them of a very excellent grate that apparently consumed its own smoke. Of course they could not make the Institute into an advertising agency for grate makers, but at the same time some of them might like to know what that particular grate was. It was a pity that architects, with the great talents which Dr. Wyld kindly presumed they as a body possessed, should not give attention to this subject of smoke-consuming grates, but it was a difficult matter for an architect to turn his attention to, because if he designed a grate his client might find it somewhat expensive to try it. Again, architects did not take any profit from building materials, and if he designed a grate it would be practically in the nature of a present to a grate-maker. Again, it would be a very difficult matter to force a smoke abatement grate upon intending builders—for that he supposed was what they meant this Central Committee to do. It was, too, a very difficult matter to compel owners of houses to suddenly change all the grates or adapt them to new conditions. If there was a simple means of adapting a grate burning ordinary coal to consume smoke, and the Smoke Abatement Society would show how it could be done, it might be carried out. At any rate, he was sure the Institute would be quite willing to assist in the object the Smoke Abatement Society had in view. As far as he was concerned, he would promise that this discussion should be printed in the JOURNAL, and that the editor should insert a notice drawing the attention of members to the invitation to join the Smoke Abatement Society. The Council would also give the matter consideration at an early date, and see if they could arrange for a committee to co-operate with the Society in some way or other. In the meantime he would put the resolution moved by Sir William Richmond, which had been formally proposed and seconded.

The resolution was carried unanimously, and upon the motion of the President a vote of thanks was also passed to Sir William Richmond and other members of the Coal Smoke Abatement Society for coming to the Institute to speak upon the subject.

The Architects' Benevolent Society.

The Annual General Meeting of the Subscribers and Donors will be held in the Rooms of the Royal Institute of British Architects, 9, Conduit Street, W., on Wednesday, the 12th March. The President, Mr. William Emerson, will take the Chair at five o'clock. The attendance of members is particularly requested to receive the Report, Balance Sheet, and for other business. The following Resolutions will be moved:

1. That By-law No. 55 shall be amended to read as follows: "All Legacies and all Donations shall (unless otherwise directed by the Donors) be laid out or invested under the direction of the Council, in or upon Government or other Securities or Investments in which a Trustee may invest under the powers of the Trustee Act 1893, or under any subsequent Act or Acts for the amendment of the same, or in or upon any Security or Investment for

the time being permitted by the Chancery Division of the High Court of Justice, or any Authority constituted in lieu thereof."

2. That the first word in By-law No. 65 shall be altered from "Six" to "Ten."

3. That in By-law No. 41 the word "week" shall be substituted for "Wednesday."

REVIEWS.

MANCHESTER CATHEDRAL.

Bell's Cathedral Series. Manchester. By Rev. Thomas Perkins, M.A. 8o. *Lond.* 1901. *Price* 1s. 6d. [*Messrs. George Bell & Sons, York Street, Covent Garden.*]

Unlike Liverpool, Manchester has not arrived at a scheme for a new "Gothic" cathedral. But upon the creation of the see in 1847 she was more fortunate than her neighbour in possessing a really fine collegiate church, which, without pretensions to cathedral rank, has been fairly well adapted to cathedral uses. But it must indeed have been a depressing moment when the devoted historian was set down before an exterior no part of which retains a remnant of its original spirit or interest, whose walls are clad in soot as with a dingy mourning garment, and whose surroundings are grimy and commercial.

Unfeeling restoration has done its very worst here, but Mr. Perkins overcame first impressions, and found beauty not only in the architecture of the church itself, but also in the effect on it of the atmosphere which is the *genius loci*. After having given a short historical sketch, which the student would supplement and correct in some of its details from other sources, and having described the external features with a conscientious lack of enthusiasm, from the new western porch to the hungry tower that swallowed so many thousand pounds and so many years of labour that might have been better spent, the author turns to the interior, and finds something worthy of more than a guide-book treatise. There is nothing earlier here than the fifteenth century; but though little of the original work appears upon the surface, it is a fine example of Perpendicular architecture, and the general proportions of the nave and choir and the magnificent woodwork deserve all the praise bestowed upon them.

The plan given is not of much architectural value, but the views are well chosen for illustrative purposes, and well reproduced, the want of clearness being no doubt partly due to atmospheric conditions. It would have added considerably to the value of the book had some clearer details of the beautiful screenwork been given.

From its subject we could hardly expect this volume of Messrs. Bell and Sons' Cathedral Series to equal most of the others in general interest.

The latter part of the book describes the Chetham's Hospital, originally the home of the Gresleys, which passed to the warden and fellows of the church, and remained their home for more than a century. After its disendowment by Edward VI., it passed to the Stanleys, and was bought under the will of Humphrey Chetham from the then occupier for a school, which was opened in 1658. Since then a considerable number of poor boys have yearly received a free education in this charming relic of old Manchester.

If the church is, as a cathedral, wanting in interest, the Chetham's Hospital is full of it, and some of the illustrations are the best in the book. The hall, library, reading-room, and feoffees' room, with their fittings and furniture, are worth careful study. They would be interesting in Oxford; in Manchester they are doubly so.

PERCY S. WORTHINGTON.

FORMAL GARDENS.

Formal Gardens in England and Scotland. By Inigo Triggs. With photographic illustrations by Charles Latham; plans, details, and perspective views by the author. 4o. *Lond.* 1901. *In three parts, at* £1. 1s. *each net.* [*B. T. Batsford, 94 High Holborn.*]

This work, the first part of which now appears, is and promises to be a most valuable addition to an already large collection of books on Gardening. Unlike the majority of these, however, this publication serves a definite purpose and supplies a real want. Mr. Triggs is to be congratulated both on his treatment of the subject and his selection of examples for illustration. This he has done with a right appreciation of their intrinsic artistic merit; he has not forgotten the fact that all old subjects are not necessarily good. In garden craft, as well as in architecture, that fact is often forgotten, and lavish praise given to subjects which owe their principal charm to the interest of time and colour, but which possess no artistic merit in themselves. The real value of Mr. Triggs's work to architects is in the series of very accurately and carefully measured drawings of the old garden plans; these, together with the sections, elevations, and details, supply just that information which, to those actually engaged in practical garden work, is so valuable and interesting. To the general public, the greatest charm of the book lies, undoubtedly, in the very fine series of photographic illustrations by Mr. Charles Latham. These are selected with admirable judgment and care, and also with a certain artistic feeling for composition, and light and shade – qualities usually absent from the vast majority of photographs.

The Historic Note is brief and interesting. Mr. Triggs traces the evolution of the fourteenth-century garden quickly and with a sympathetic hand. He does rightly at the close of the note to bring into sudden relief and strong contrast to the quiet beauty of the old-world gardens he

illustrates some of the absurdities and inanities of that dreadful product of an immoral age—"Landscape Gardening," with all its shocking want of principle and ideas. In relation to this it is impossible to forget the debt of gratitude all garden lovers of to-day owe to men like Sedding, Reginald Blomfield, Thomas, Mawson, Forbes, Sieveking and others for the good work they have done in reviving the old truths of garden design, in educating the public to a recognition of these truths, and leading all who care for their work to better things. It is due to writers like these, with their energy and enthusiasm, that "Landscape Gardening" lies to-day a-dying, if not already dead. That is a result in itself a sufficient tribute to their zeal, and one of which they may well be proud. Without such influence, the many recent admirable books on garden craft, of which this particular one of Mr. Triggs is such an excellent example, would probably have never appeared; the architect would not yet have realised, as he does to-day (or it is hoped he does) the connection between garden and house design; and, in short, we should still be in the wilderness, wandering, with no intelligible way out of it.

As another outcome of all that work we are glad to welcome this book by Mr. Triggs. There can be no doubt but that it will prove of the greatest assistance to modern garden craft, not only for the reasons already given, but also because the illustrations suggest all kinds of delightful possibilities to those of a receptive and thoughtful turn of mind; in them are the happiest solutions to difficult problems arising every day, and, above all, there is that wonderful incentive to work, commonly called "inspiration." The illustrations abound in "inspirations," not so much in the perspective views, which are open to criticism (two, at least, would have been better omitted), as in the plans and photographs, which undoubtedly constitute by far the greatest charm of the work.

C. E. Mallows.

MINUTES. VIII.

At a Special General Meeting, held Monday 3rd March 1902, at 8 p.m., Mr. William Emerson, *President*, in the Chair, with 28 Fellows (including 11 members of the Council), 24 Associates (including 2 members of the Council), 1 Hon. Associate, and visitors, the object of the meeting having been stated—viz. to elect the Royal Gold Medallist for the current year—the President announced that owing to the death of the nominee for the Medal, Mr. John Francis Bentley, the Council had resolved not to proceed further in the matter until the King's pleasure be known respecting the presentation of the Medal to Mr. Bentley's family in honour of the great work that he had done.

On the motion of the President, it was resolved that a message of condolence be sent from the Institute to the family of the late Mr. Bentley.

At the Eighth General Meeting of the Session, held at the conclusion of the Special General Meeting above referred to, and similarly constituted, the Minutes of the Meeting held on Monday, 17th February 1902 [*ante*, p. 192] were taken as read and signed as correct.

The Hon. Secretary announced the decease of the following Associates:—William Chastel de Boinville, Goymour Cuthbert, and Thomas Gordon.

The Hon. Secretary referred to the receipt of a number of donations to the Library, and a vote of thanks was passed to the donors.

The following Associate attending for the first time since his election was formally admitted by the President and signed the Register—viz. William John Devlin.

The following candidates for membership, found by the Council to be eligible and qualified according to the Charter and By-laws, were recommended for election—viz.: As FELLOWS (2), Robert Langton Cole (*A.* 1889); James Miller, Glasgow. As ASSOCIATES (3), Alfred Ernest Biggs (*Probationer* 1895, *Student* 1897, *Qualified* 1901), Felixstowe; Walter Watkin Ellison (*Probationer* 1895, *Student* 1898, *Qualified* 1901); Thomas Marshall Smith (*Probationer* 1896, *Student* 1897, *Qualified* 1901).

The following candidate was elected as Associate under By-law 9—viz.

CHARLES HENRY GAGE (*Probationer* 1894, *Student* 1896, *Qualified* 1901).

Sir Benjamin Stone, M.P., having addressed the Meeting on the subject of the work and aims of the National Photographic Record Association, which had kindly lent for the inspection of members a large collection of photographs of architectural work which were about to be deposited in the British Museum, a vote of thanks was passed by acclamation to Sir Benjamin Stone, and also to the Association for the loan of the photographs.

Sir William Richmond, K.C.B., R.A. [*H.A.*], addressed the meeting on behalf of the Coal Smoke Abatement Society, and, in accordance with notice, moved the following Resolution:

> That in view of a Resolution of the Coal Smoke Abatement Society seeking the co-operation of the Institute, members are invited to join the Society, or that such other assistance be given by the Institute as the Council may deem desirable.

The resolution having been seconded by Mr. John Slater, B.A., *Vice-President*, a discussion ensued, in which various methods of obviating the smoke nuisance were referred to. The resolution as above was then put from the Chair and carried unanimously.

A vote of thanks was passed to Sir William Richmond for bringing the matter before the Institute, and to members of the Society for attending to speak upon it.

The proceedings then closed and the Meeting separated at 9.30 p.m.